This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

FIG. 1

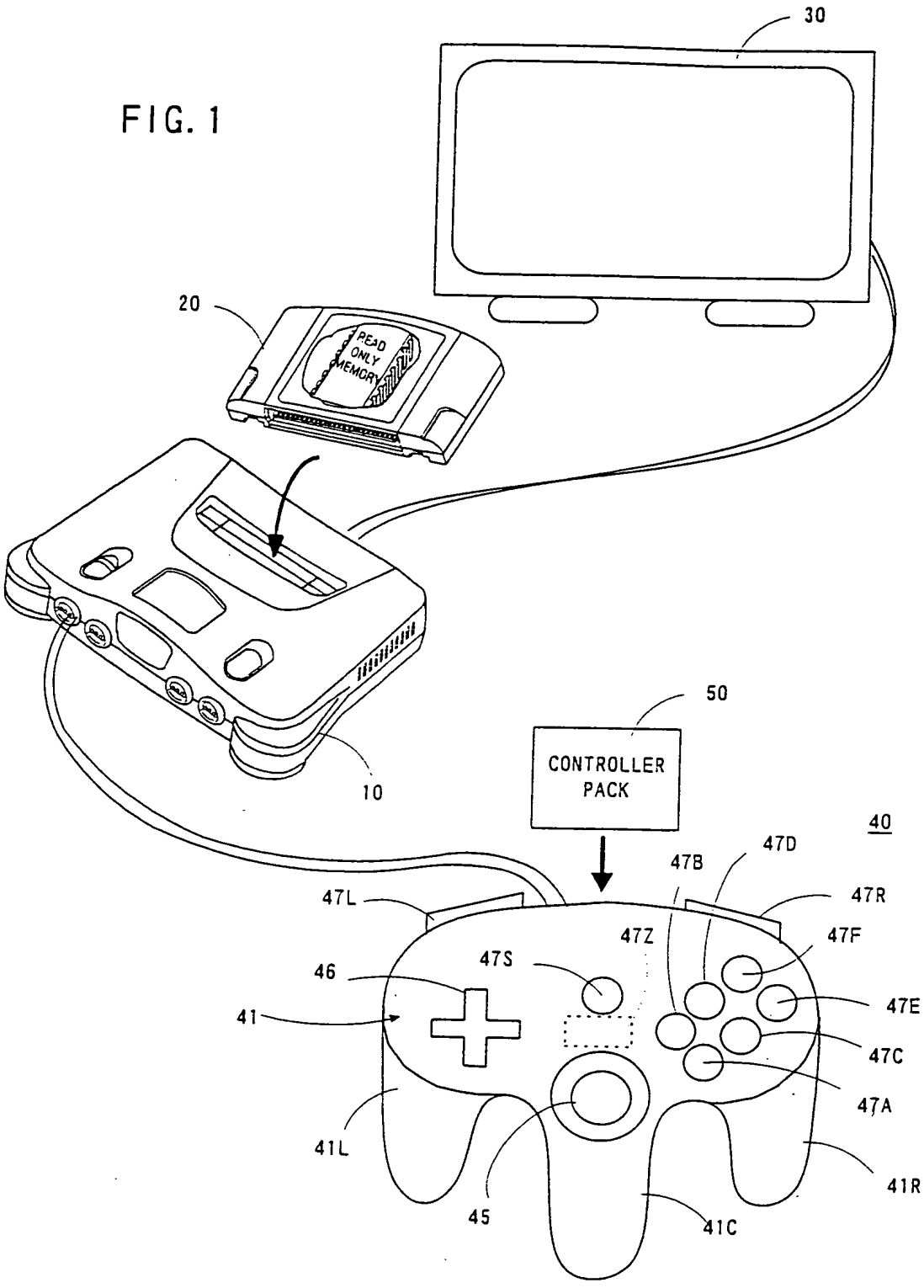

30
20
READ ONLY MEMORY
10
50
CONTROLLER PACK
40
47L
47B
47D
47R
47Z
47F
47S
46
47E
41
47C
47A
41L
41R
45
41C

FIG. 2

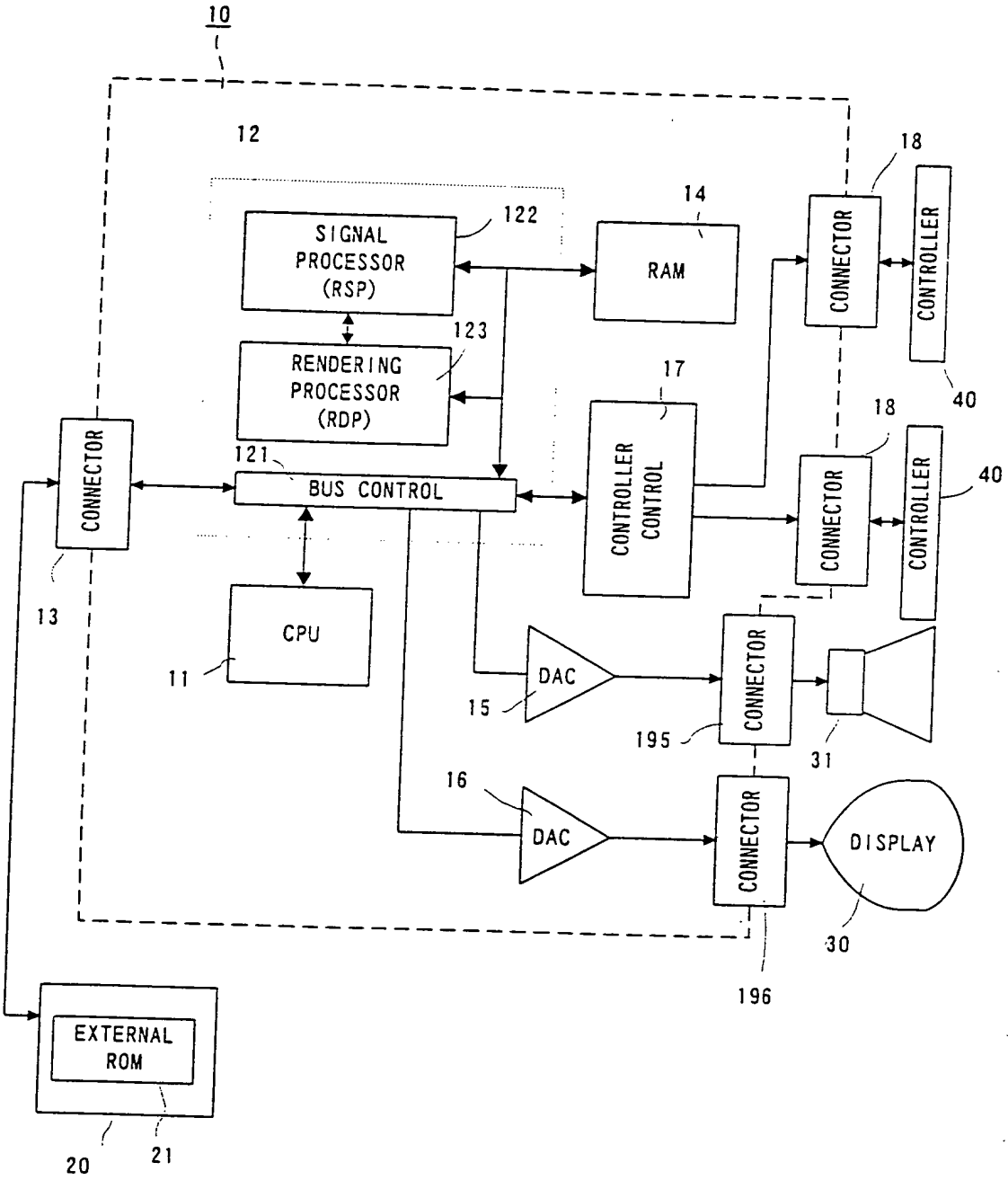

10
12
SIGNAL PROCESSOR (RSP)
122
RAM
14
CONNECTOR
18
CONTROLLER
40
RENDERING PROCESSOR (RDP)
123
17
CONNECTOR
121
BUS CONTROL
CONTROLLER CONTROL
18
CONTROLLER
40
13
CPU
11
DAC
15
CONNECTOR
195
31
16
DAC
CONNECTOR
DISPLAY
30
196
EXTERNAL ROM
20
21

FIG. 3

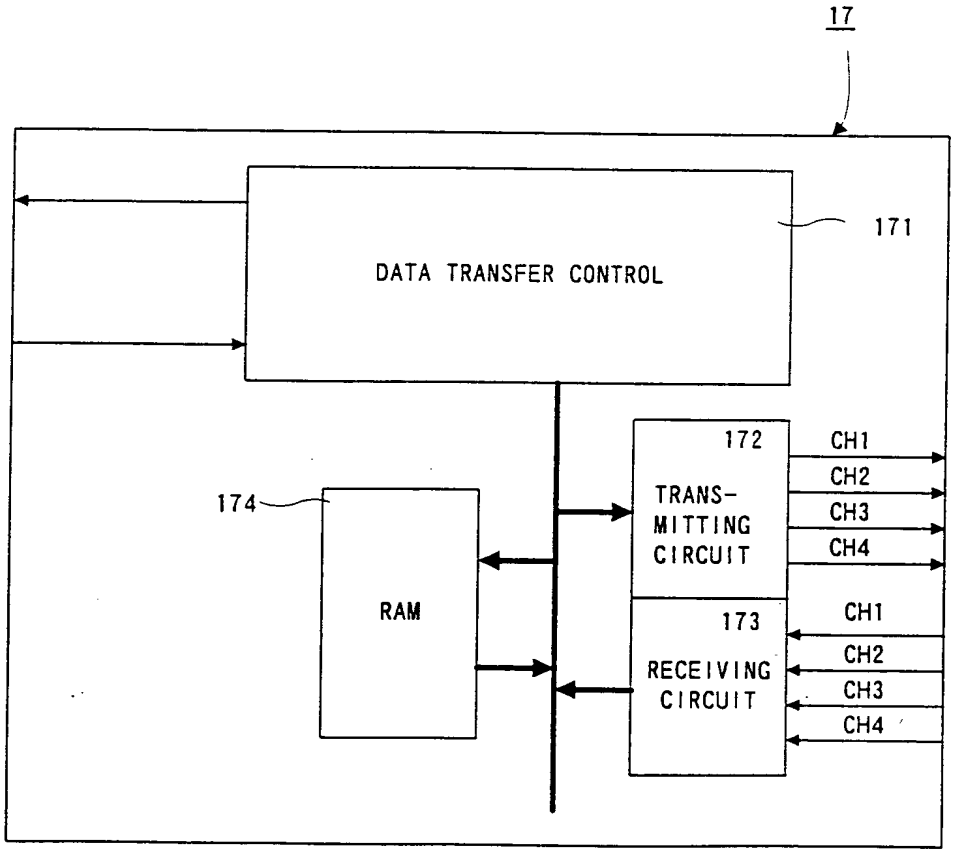

17
171
DATA TRANSFER CONTROL
172
TRANS-
MITTING
CIRCUIT
CH1
CH2
CH3
CH4
174
RAM
173
RECEIVING
CIRCUIT
CH1
CH2
CH3
CH4

FIG. 4

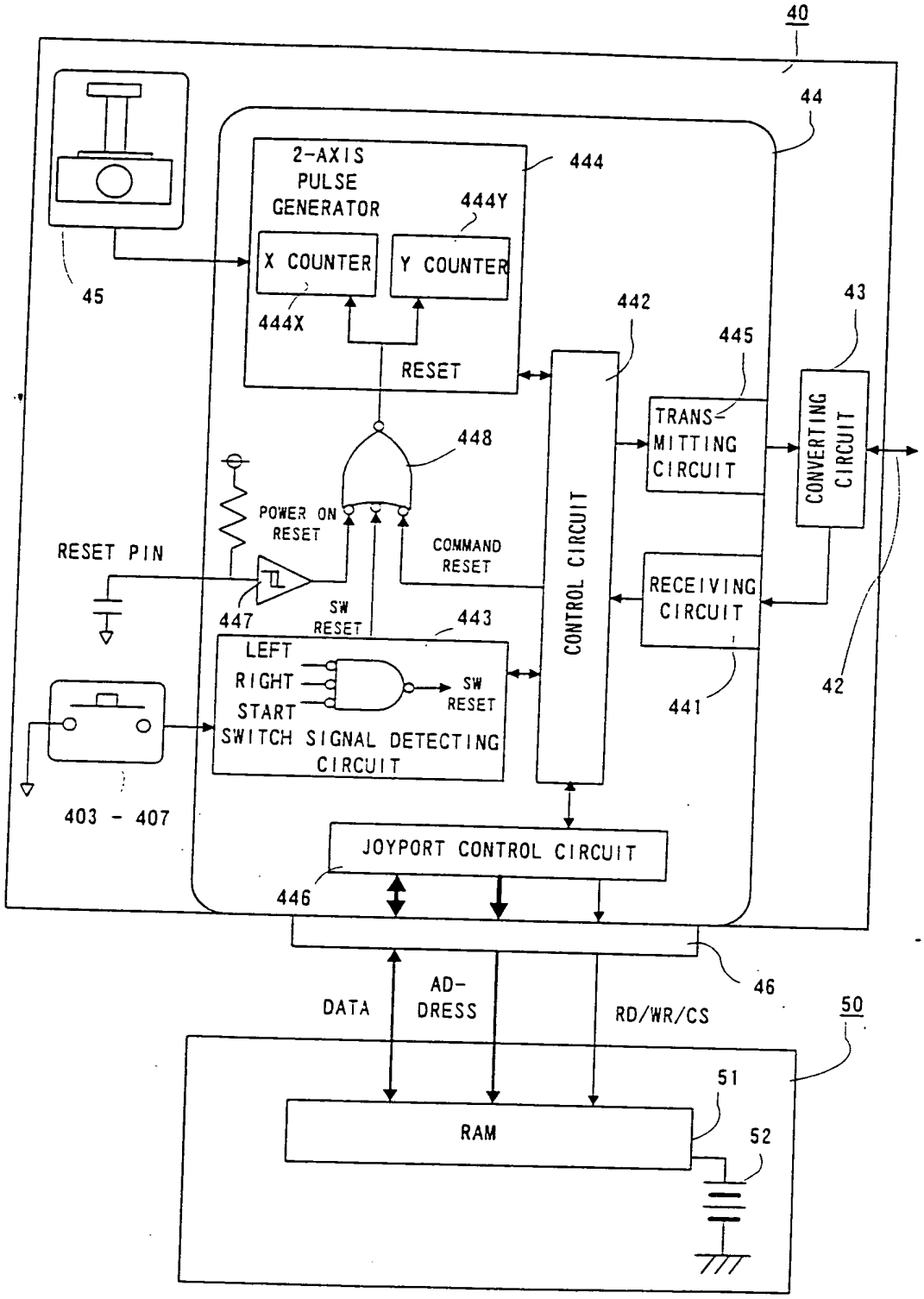

40
44
2-AXIS PULSE GENERATOR
444
444Y
X COUNTER
Y COUNTER
444X
RESET
45
442
445
43
TRANS-MITTING CIRCUIT
CONVERTING CIRCUIT
448
POWER ON RESET
COMMAND RESET
RESET PIN
447
SW RESET
443
CONTROL CIRCUIT
RECEIVING CIRCUIT
LEFT
RIGHT
START
SW RESET
SWITCH SIGNAL DETECTING CIRCUIT
441
42
403 - 407
JOYPORT CONTROL CIRCUIT
446
46
DATA
AD-DRESS
RD/WR/CS
50
51
RAM
52

FIG. 5

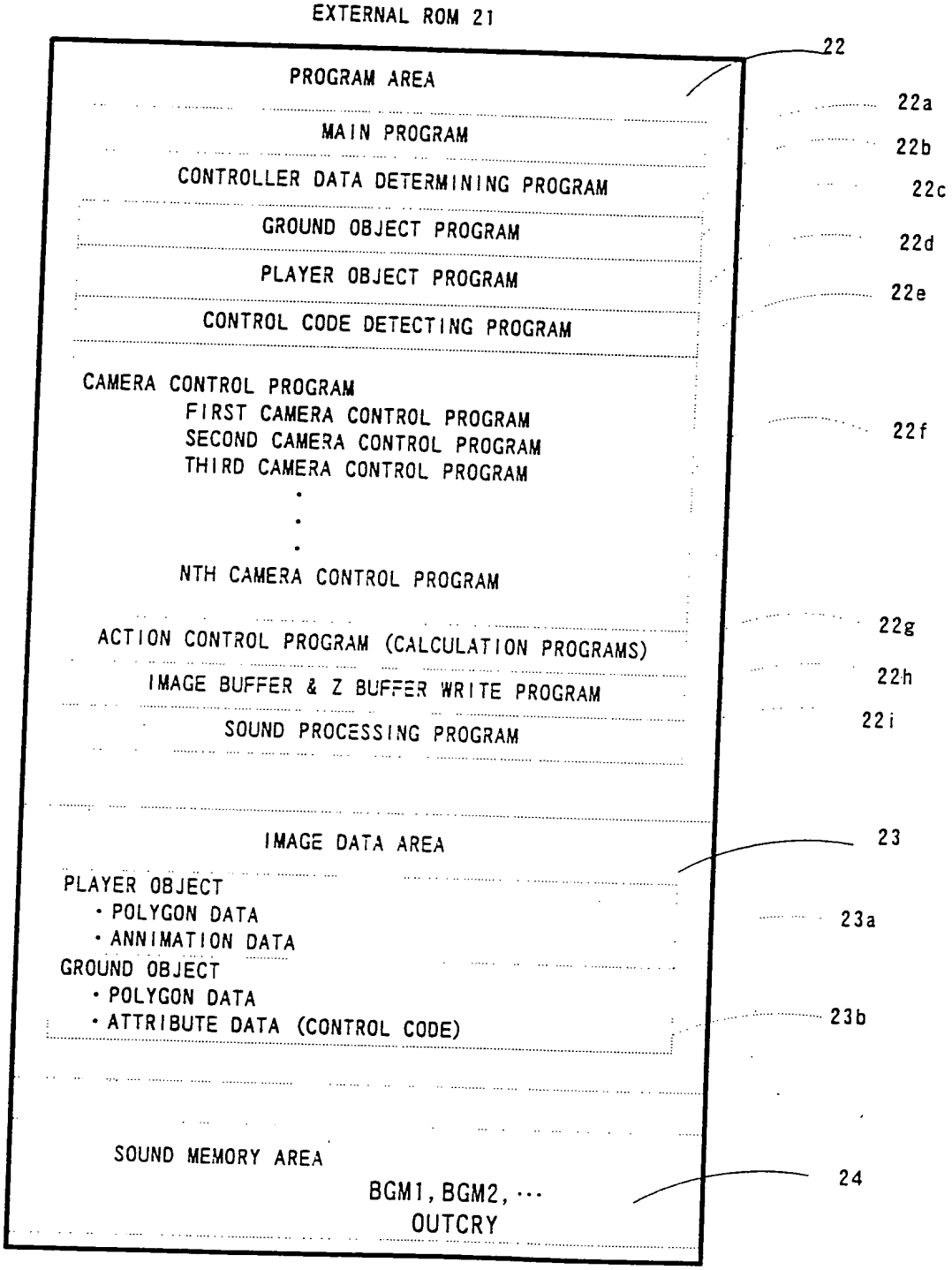

EXTERNAL ROM 21
22
PROGRAM AREA
22a
MAIN PROGRAM
22b
CONTROLLER DATA DETERMINING PROGRAM
22c
GROUND OBJECT PROGRAM
22d
PLAYER OBJECT PROGRAM
22e
CONTROL CODE DETECTING PROGRAM
CAMERA CONTROL PROGRAM
FIRST CAMERA CONTROL PROGRAM
SECOND CAMERA CONTROL PROGRAM
THIRD CAMERA CONTROL PROGRAM
NTH CAMERA CONTROL PROGRAM
22f
ACTION CONTROL PROGRAM (CALCULATION PROGRAMS)
22g
IMAGE BUFFER & Z BUFFER WRITE PROGRAM
22h
SOUND PROCESSING PROGRAM
22i
IMAGE DATA AREA
23
PLAYER OBJECT
• POLYGON DATA
• ANNIMATION DATA
23a
GROUND OBJECT
• POLYGON DATA
• ATTRIBUTE DATA (CONTROL CODE)
23b
SOUND MEMORY AREA
BGM1, BGM2, ···
OUTCRY
24

FIG. 6

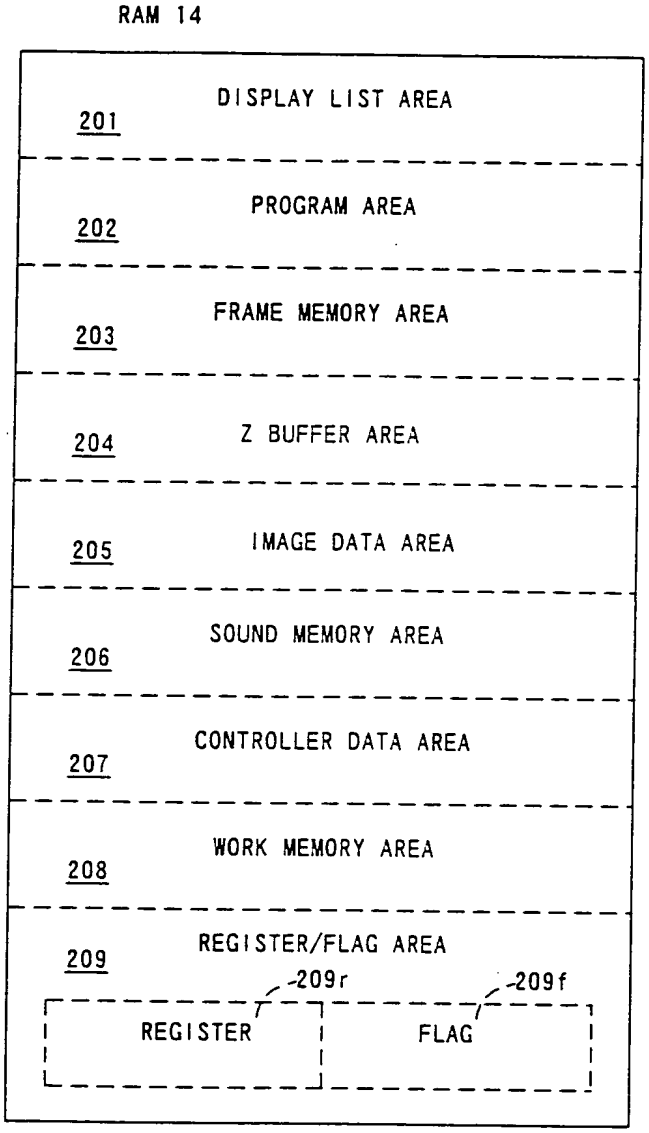

RAM 14
DISPLAY LIST AREA
201
PROGRAM AREA
202
FRAME MEMORY AREA
203
Z BUFFER AREA
204
IMAGE DATA AREA
205
SOUND MEMORY AREA
206
CONTROLLER DATA AREA
207
WORK MEMORY AREA
208
REGISTER/FLAG AREA
209
209r
209f
REGISTER
FLAG

FIG. 7

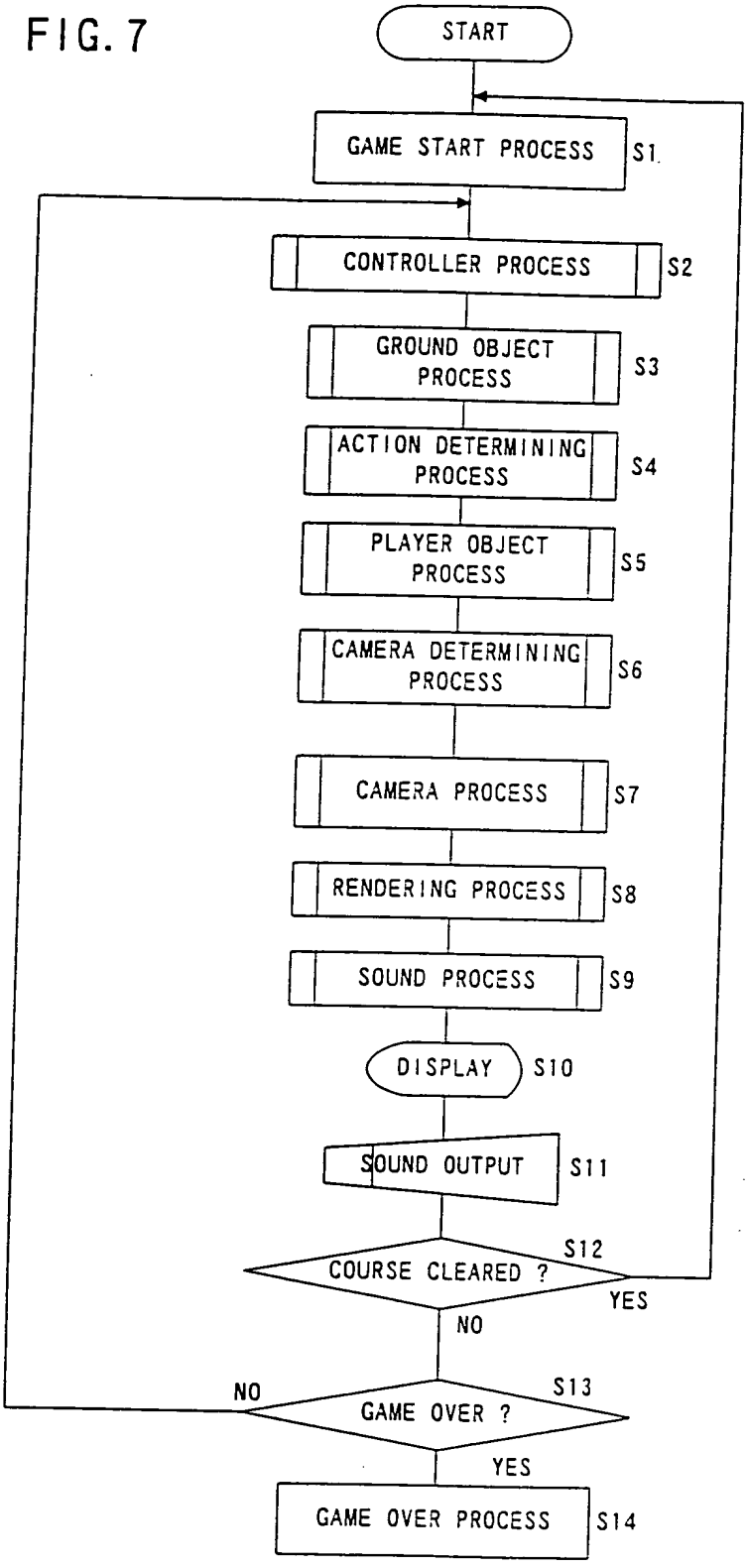

START
GAME START PROCESS
S1
CONTROLLER PROCESS
S2
GROUND OBJECT PROCESS
S3
ACTION DETERMINING PROCESS
S4
PLAYER OBJECT PROCESS
S5
CAMERA DETERMINING PROCESS
S6
CAMERA PROCESS
S7
RENDERING PROCESS
S8
SOUND PROCESS
S9
DISPLAY
S10
SOUND OUTPUT
S11
S12
COURSE CLEARED ?
YES
NO
NO
S13
GAME OVER ?
YES
GAME OVER PROCESS
S14

FIG. 8

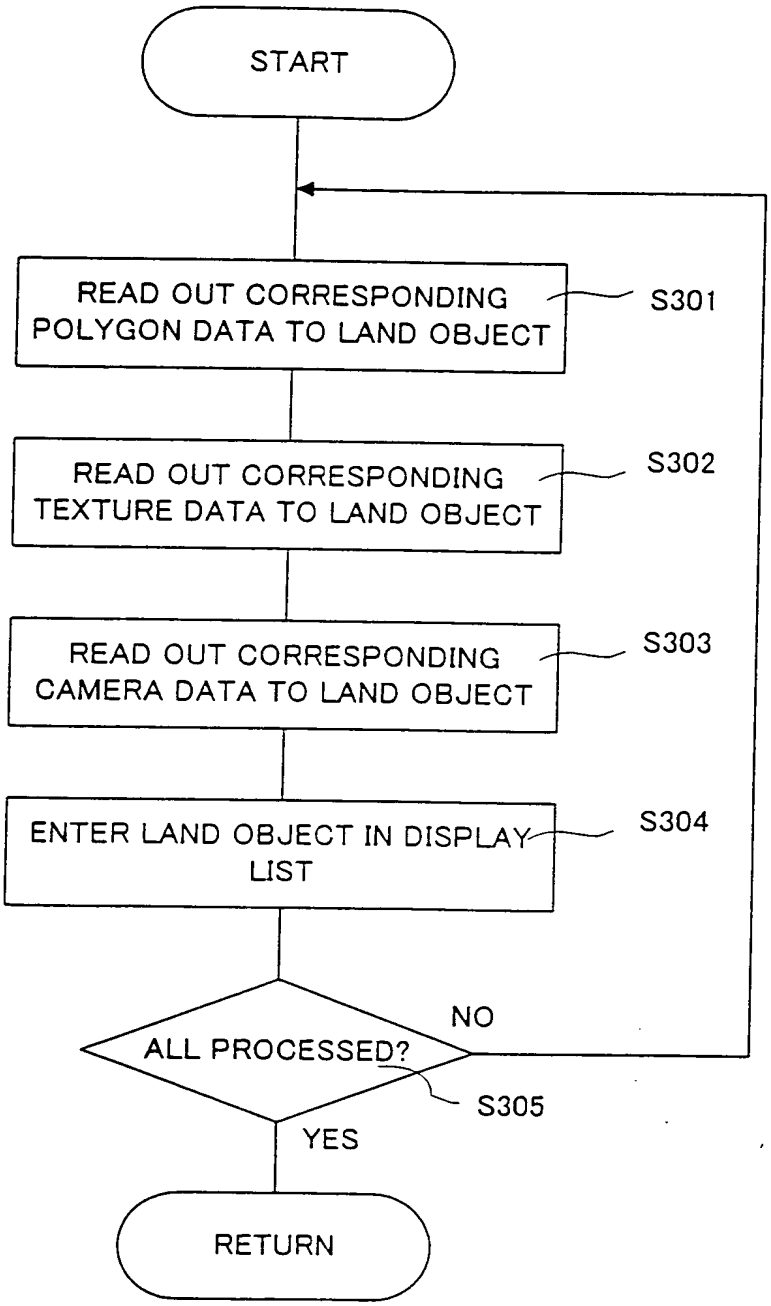

START
READ OUT CORRESPONDING POLYGON DATA TO LAND OBJECT
S301
READ OUT CORRESPONDING TEXTURE DATA TO LAND OBJECT
S302
READ OUT CORRESPONDING CAMERA DATA TO LAND OBJECT
S303
ENTER LAND OBJECT IN DISPLAY LIST
S304
ALL PROCESSED?
NO
S305
YES
RETURN

FIG. 9

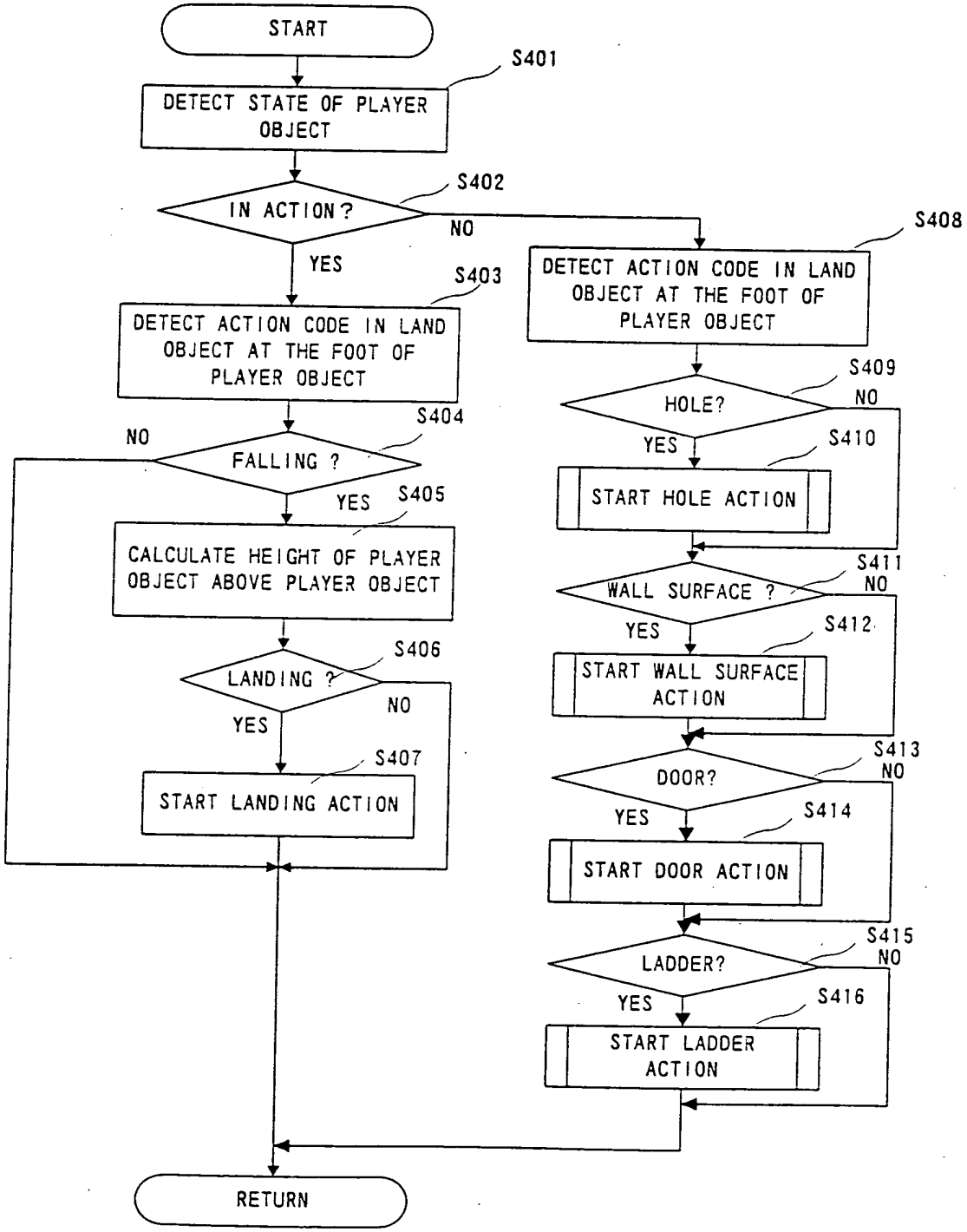

START
S401
DETECT STATE OF PLAYER OBJECT
S402
IN ACTION?
NO
YES
S403
DETECT ACTION CODE IN LAND OBJECT AT THE FOOT OF PLAYER OBJECT
S404
NO
FALLING ?
YES
S405
CALCULATE HEIGHT OF PLAYER OBJECT ABOVE PLAYER OBJECT
S406
LANDING ?
NO
YES
S407
START LANDING ACTION
S408
DETECT ACTION CODE IN LAND OBJECT AT THE FOOT OF PLAYER OBJECT
S409
HOLE?
NO
YES
S410
START HOLE ACTION
S411
WALL SURFACE ?
NO
YES
S412
START WALL SURFACE ACTION
S413
DOOR?
NO
YES
S414
START DOOR ACTION
S415
LADDER?
NO
YES
S416
START LADDER ACTION
RETURN

FIG. 10

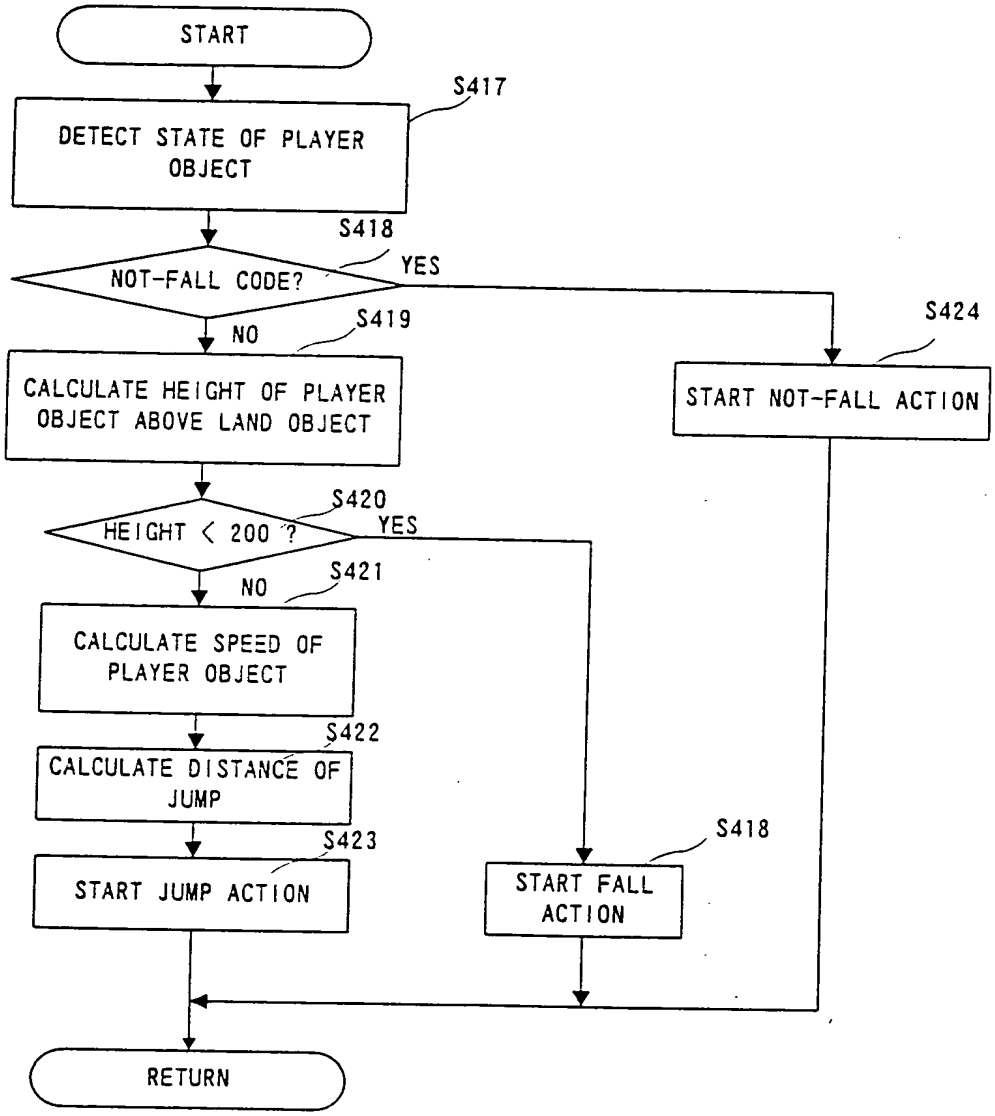

START
S417
DETECT STATE OF PLAYER OBJECT
S418
NOT-FALL CODE?
YES
NO
S419
CALCULATE HEIGHT OF PLAYER OBJECT ABOVE LAND OBJECT
S424
START NOT-FALL ACTION
S420
HEIGHT < 200 ?
YES
NO
S421
CALCULATE SPEED OF PLAYER OBJECT
S422
CALCULATE DISTANCE OF JUMP
S423
START JUMP ACTION
S418
START FALL ACTION
RETURN

FIG. 11

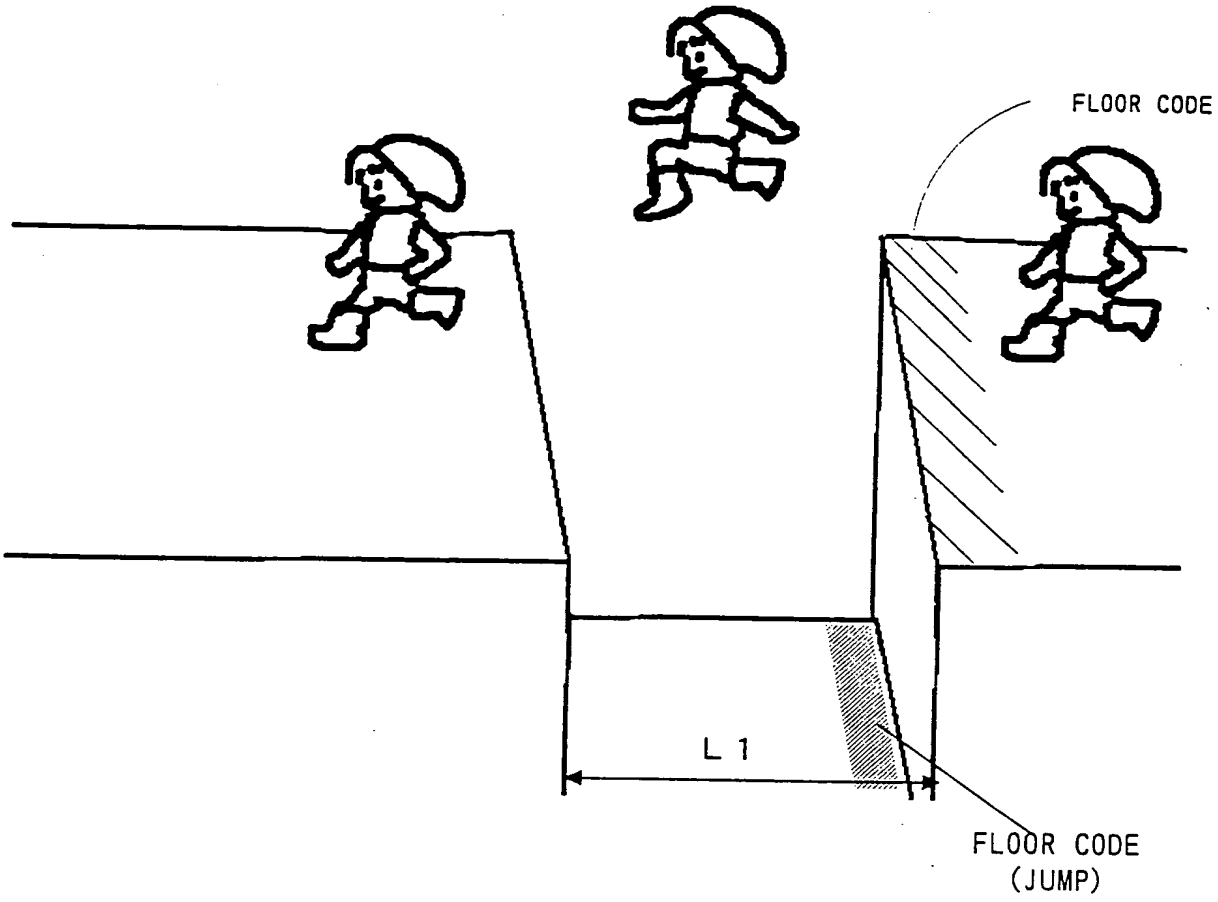


FIG. 12

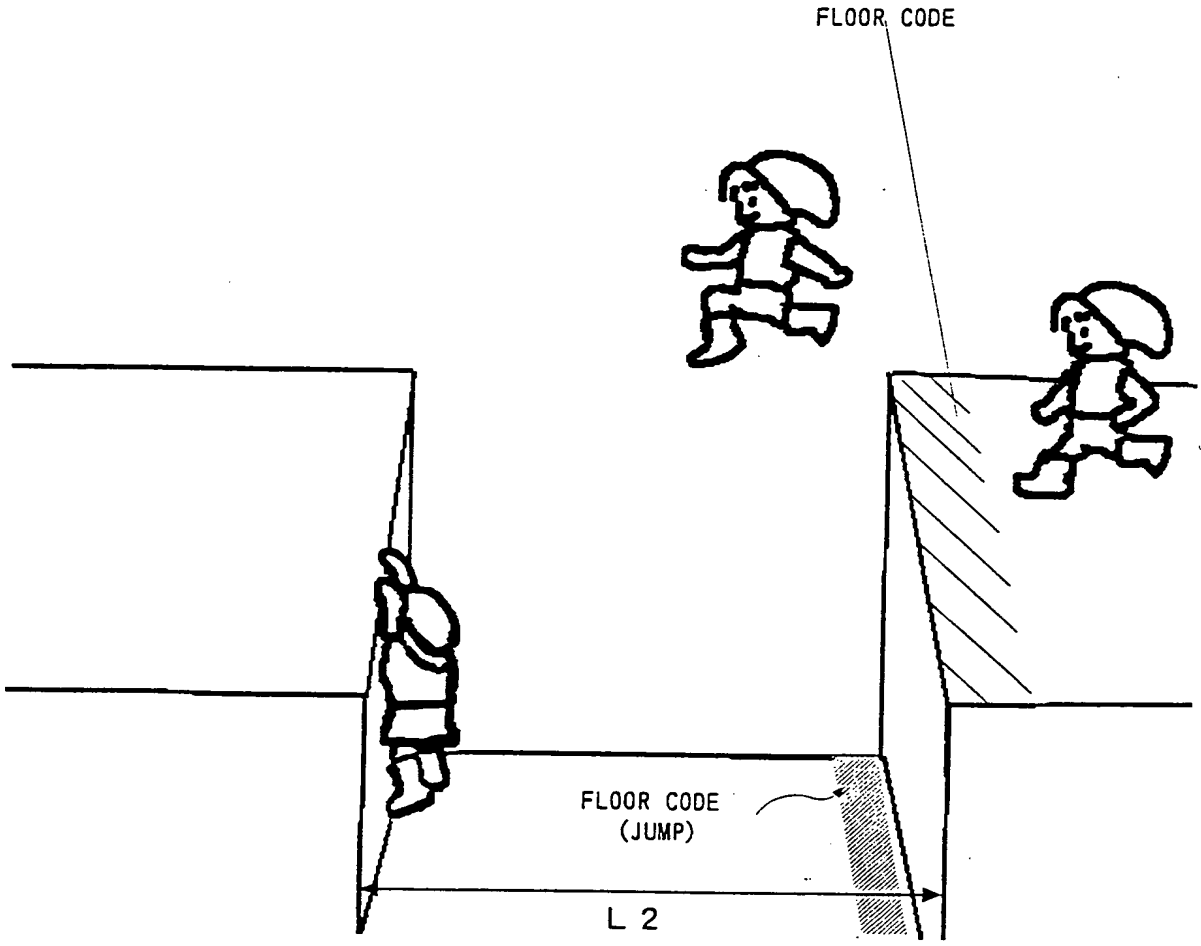


FIG. 13

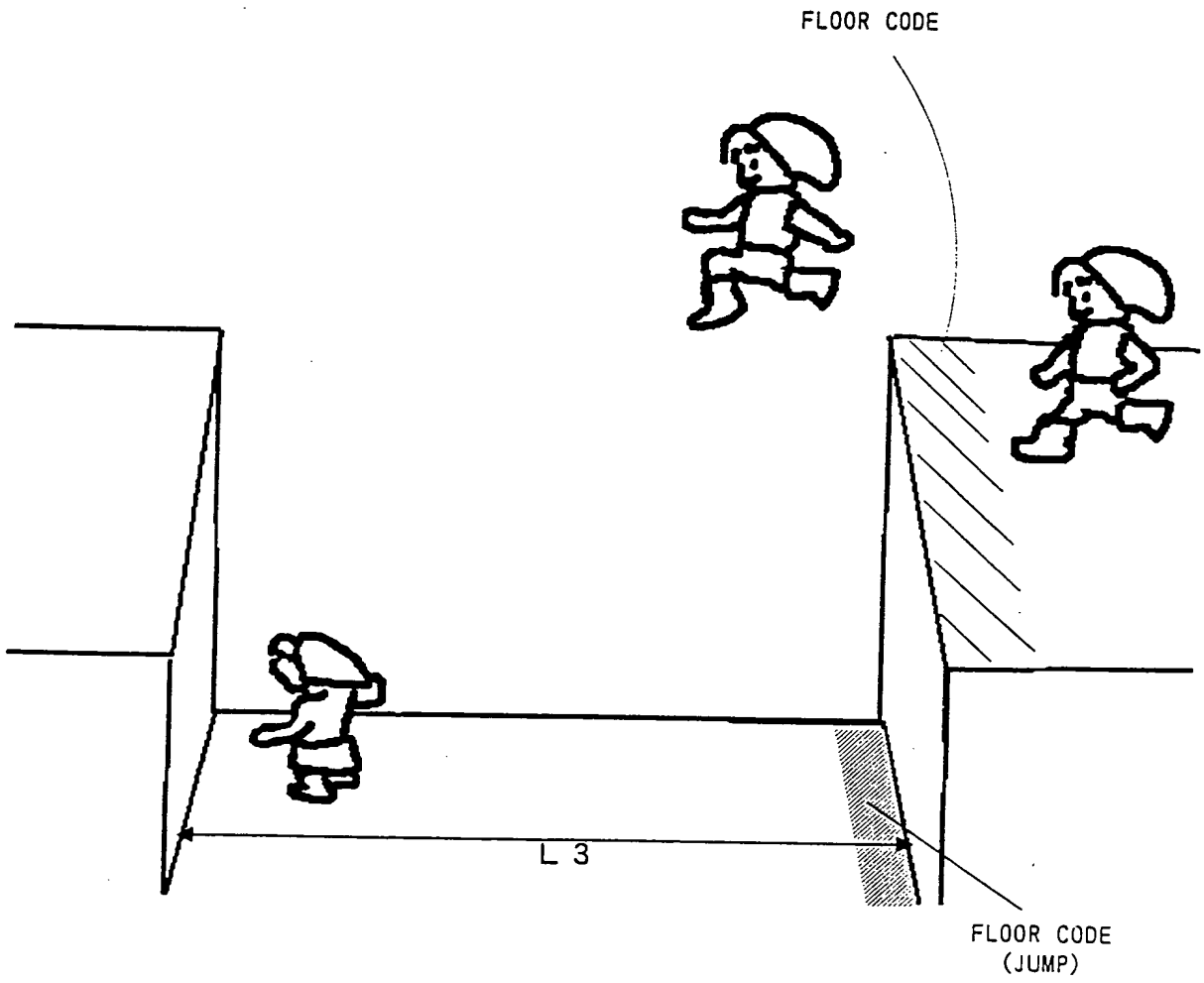


FIG. 14

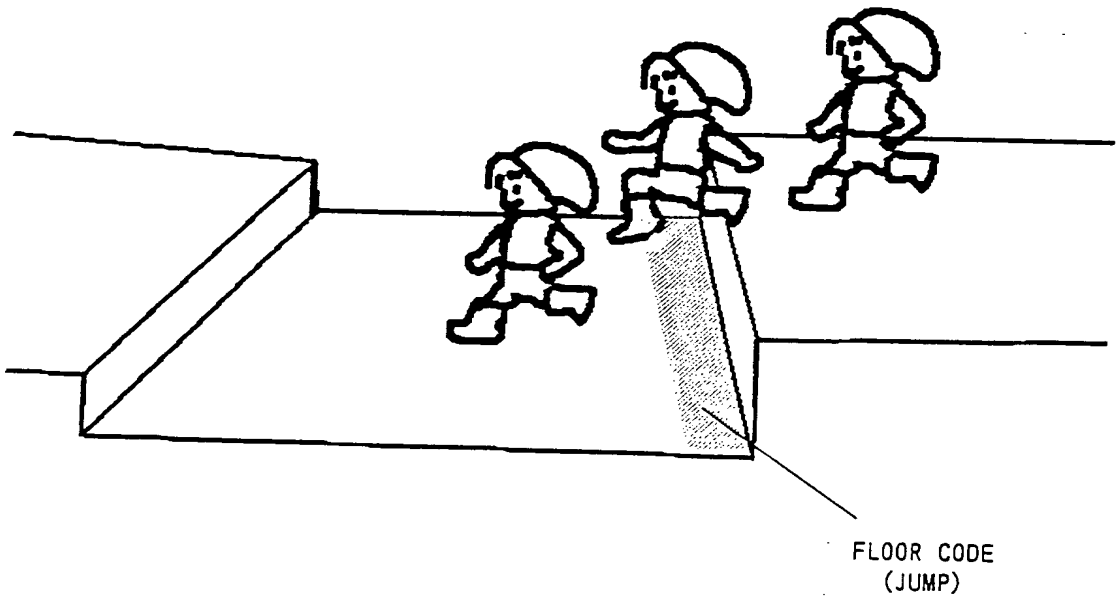


FIG. 15

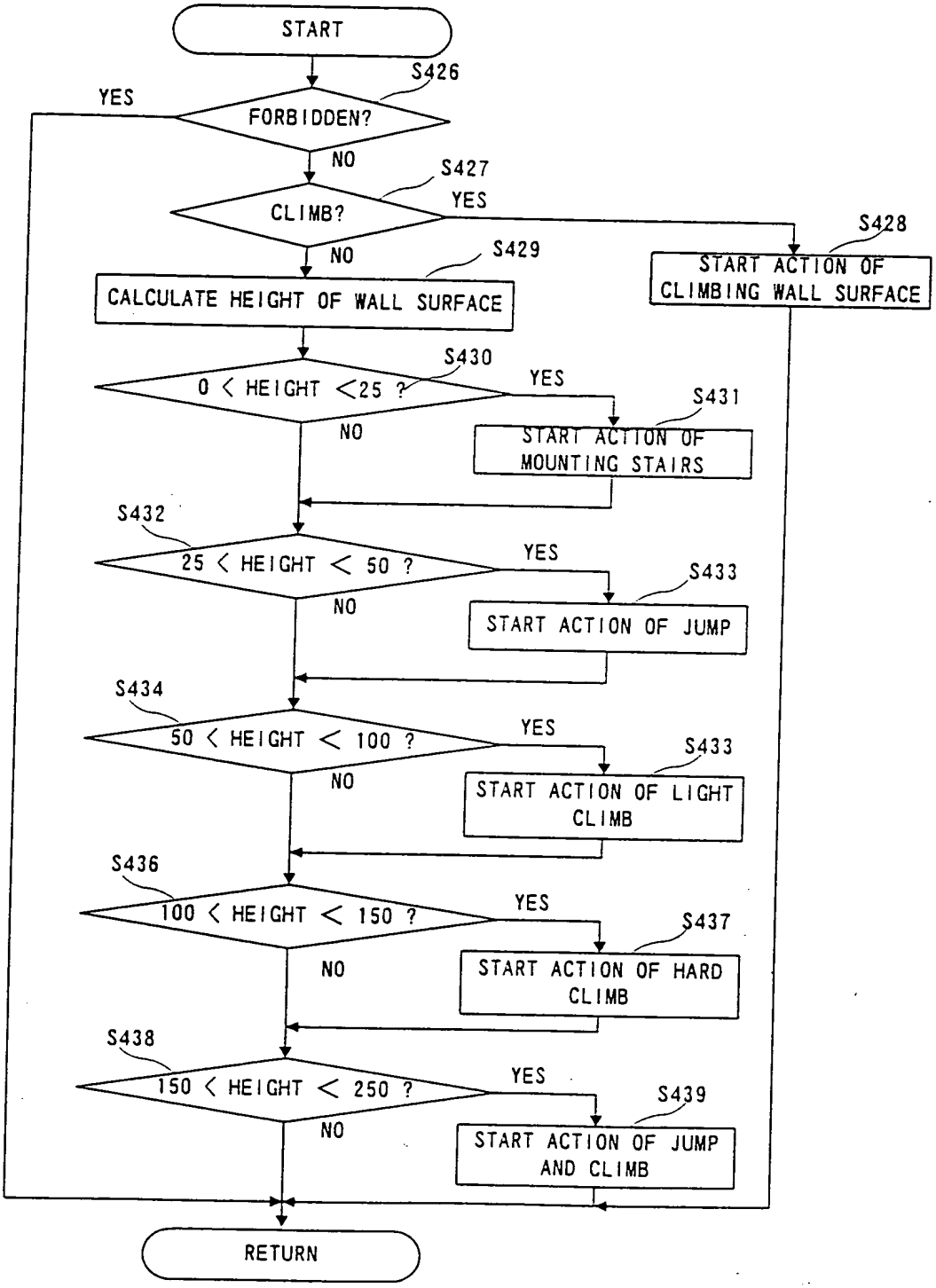

START
S426
FORBIDDEN?
YES
NO
S427
CLIMB?
YES
NO
S428
START ACTION OF CLIMBING WALL SURFACE
S429
CALCULATE HEIGHT OF WALL SURFACE
S430
0 < HEIGHT <25 ?
YES
NO
S431
START ACTION OF MOUNTING STAIRS
S432
25 < HEIGHT < 50 ?
YES
NO
S433
START ACTION OF JUMP
S434
50 < HEIGHT < 100 ?
YES
NO
S433
START ACTION OF LIGHT CLIMB
S436
100 < HEIGHT < 150 ?
YES
NO
S437
START ACTION OF HARD CLIMB
S438
150 < HEIGHT < 250 ?
YES
NO
S439
START ACTION OF JUMP AND CLIMB
RETURN

FIG. 16

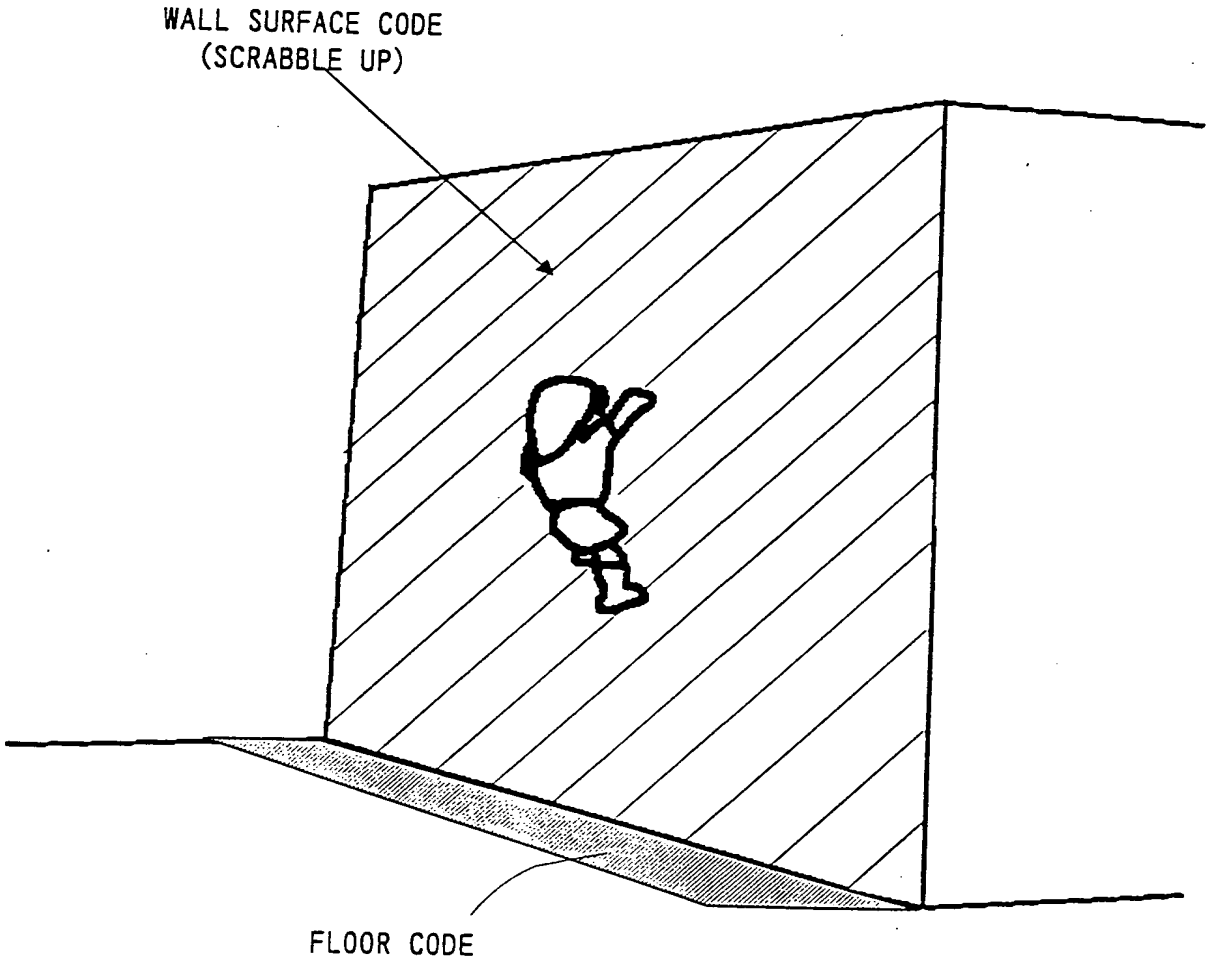


FIG. 17

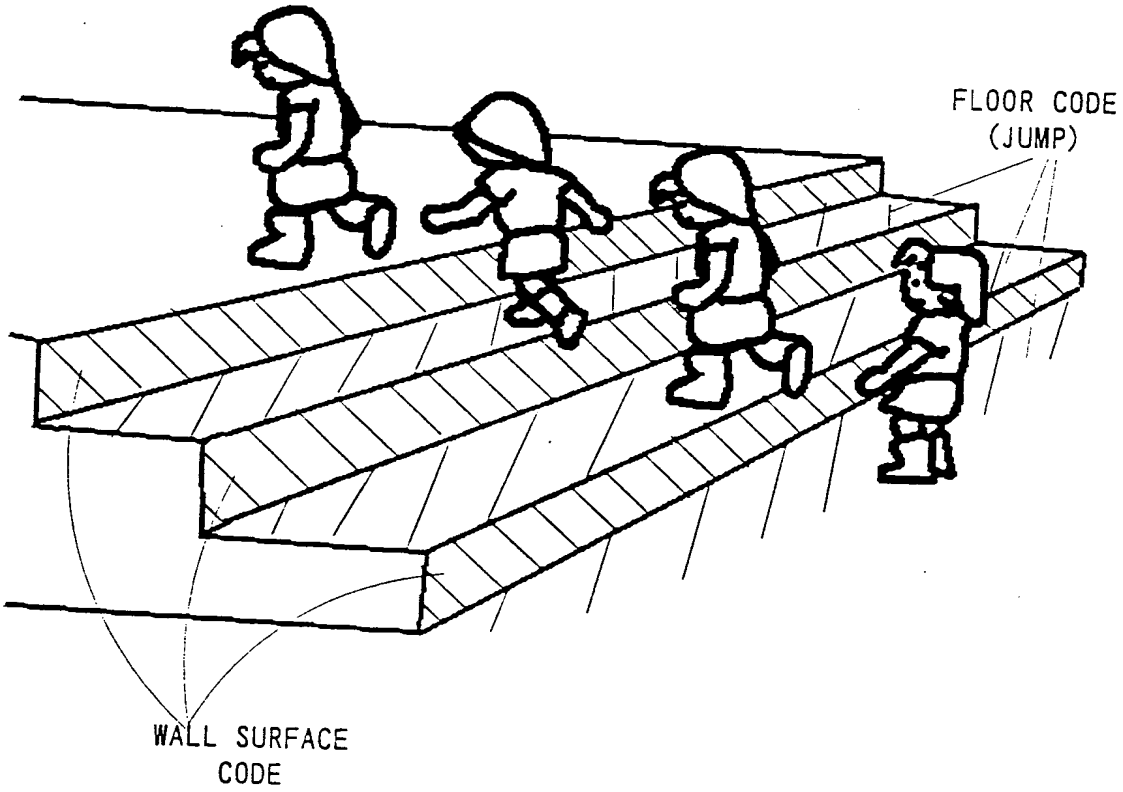


FIG. 18

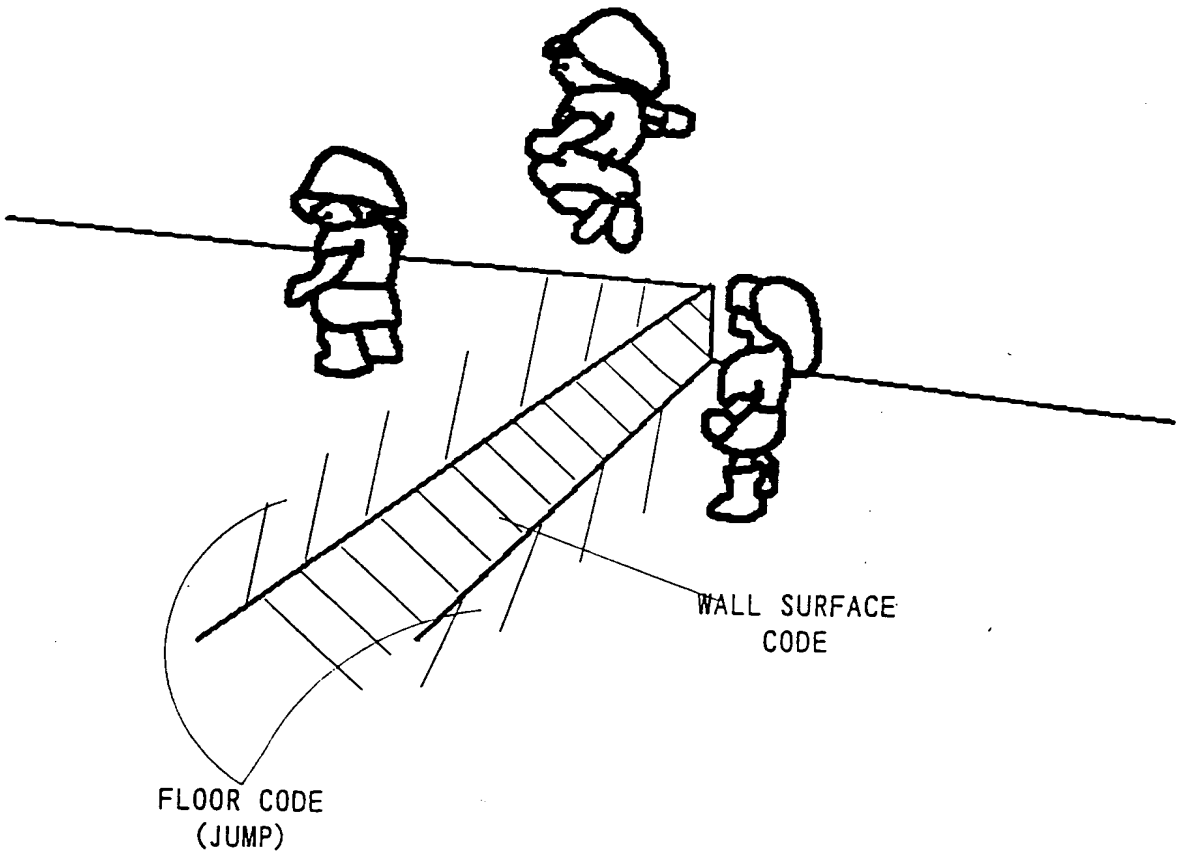


FIG. 19

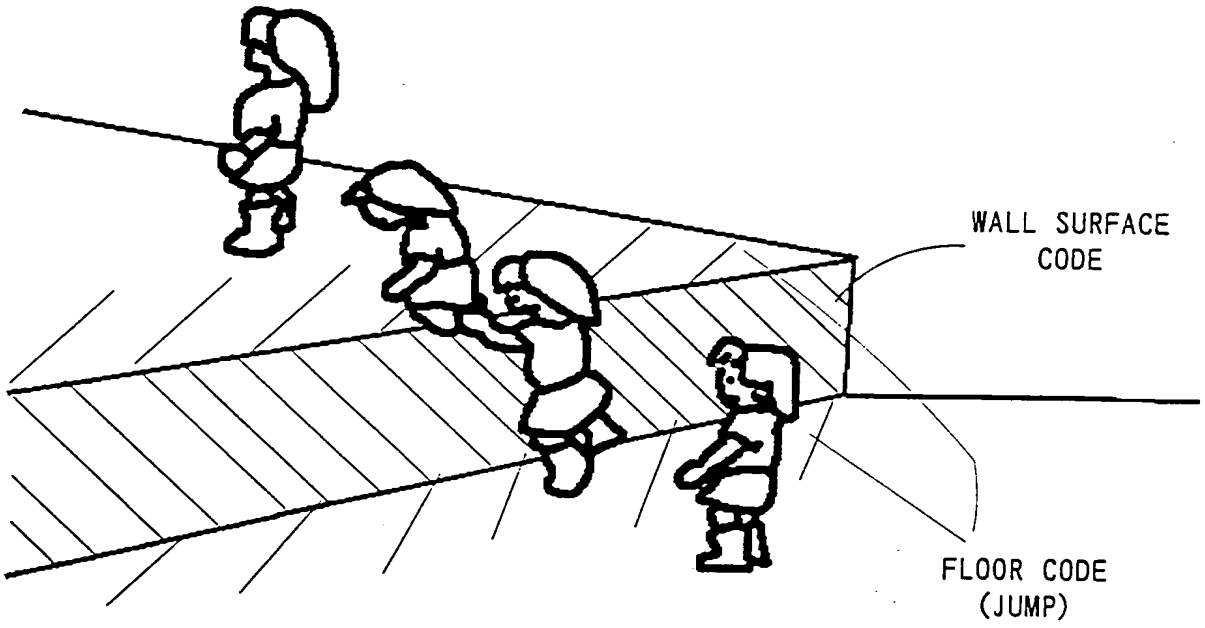


FIG. 20

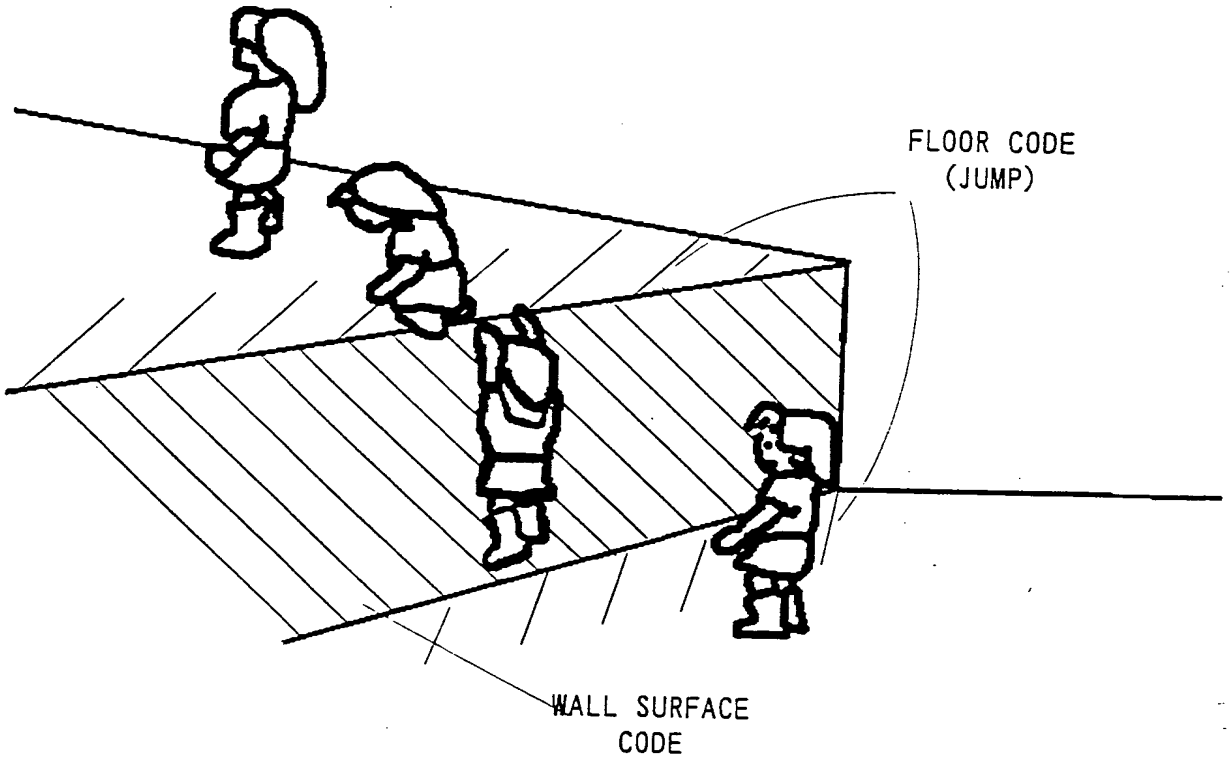


FIG. 21

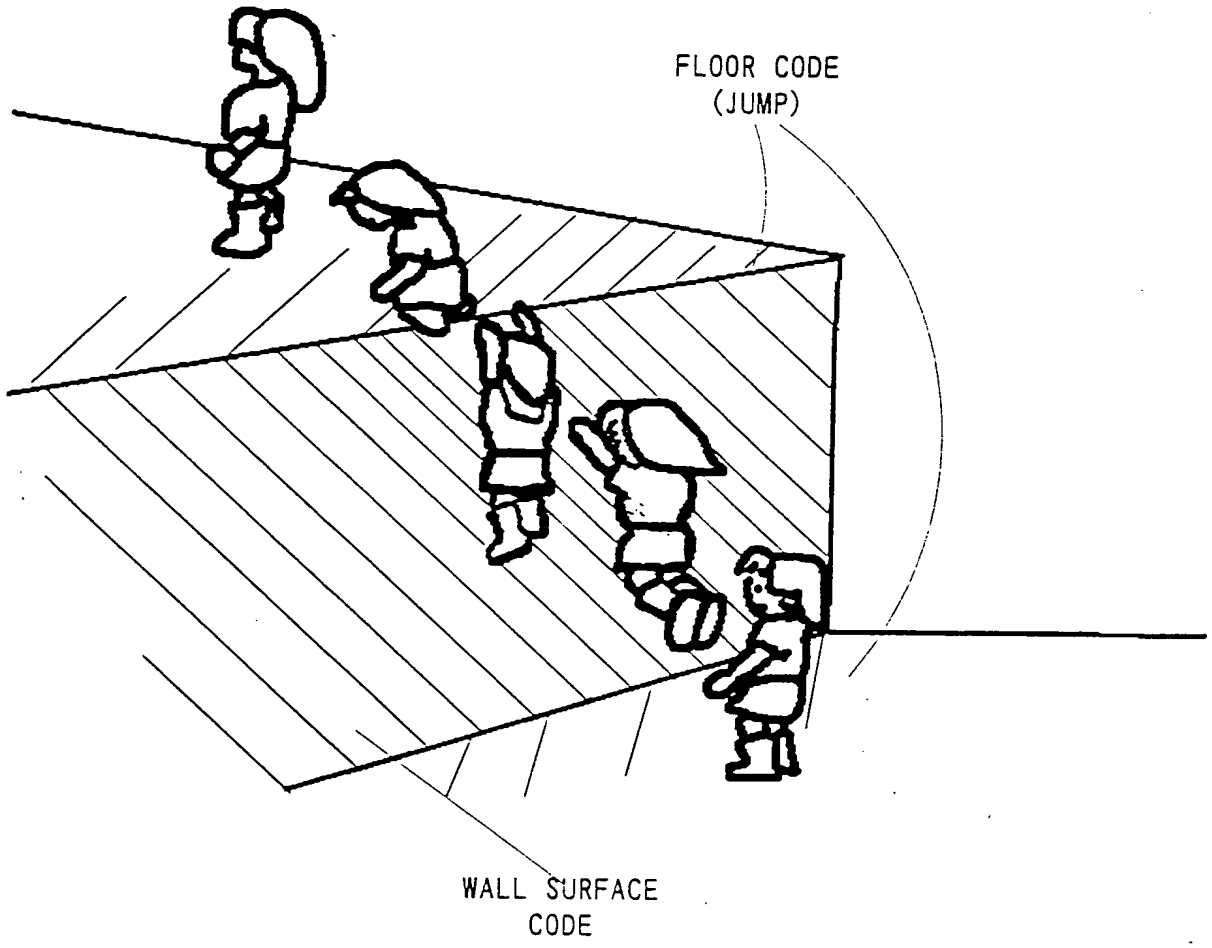


FIG. 22

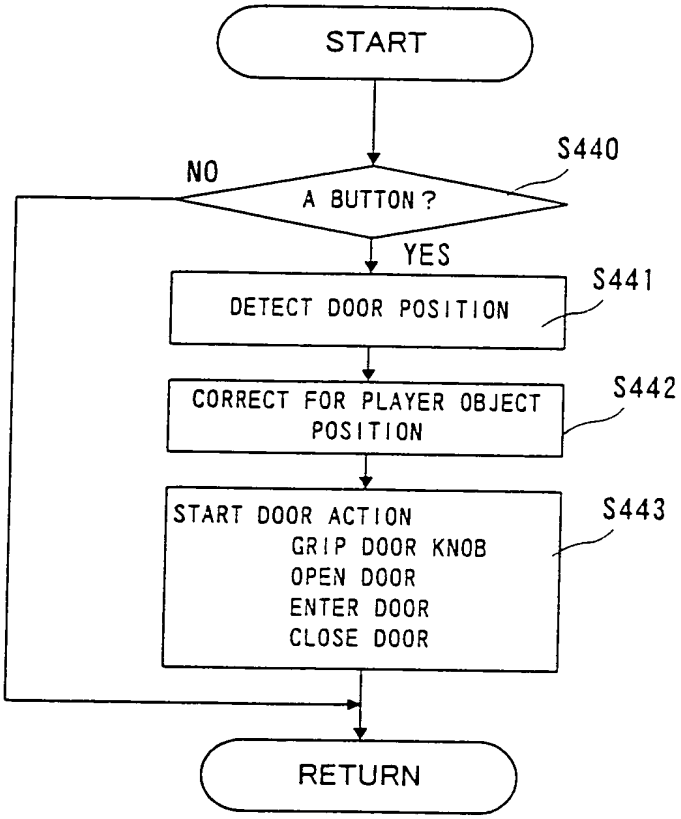

START
S440
NO
A BUTTON ?
YES
S441
DETECT DOOR POSITION
S442
CORRECT FOR PLAYER OBJECT POSITION
S443
START DOOR ACTION
GRIP DOOR KNOB
OPEN DOOR
ENTER DOOR
CLOSE DOOR
RETURN

FIG. 23

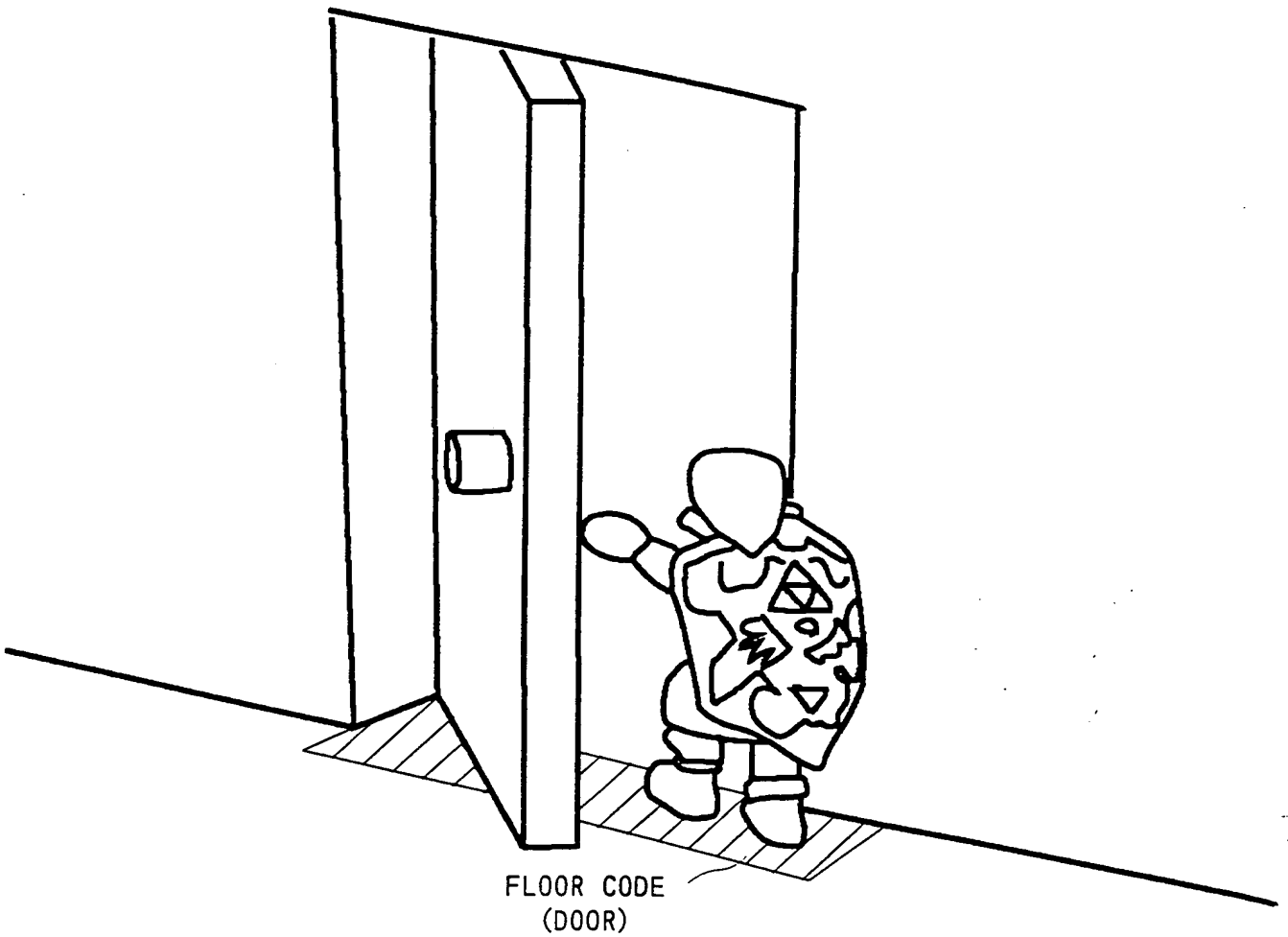


FIG. 24

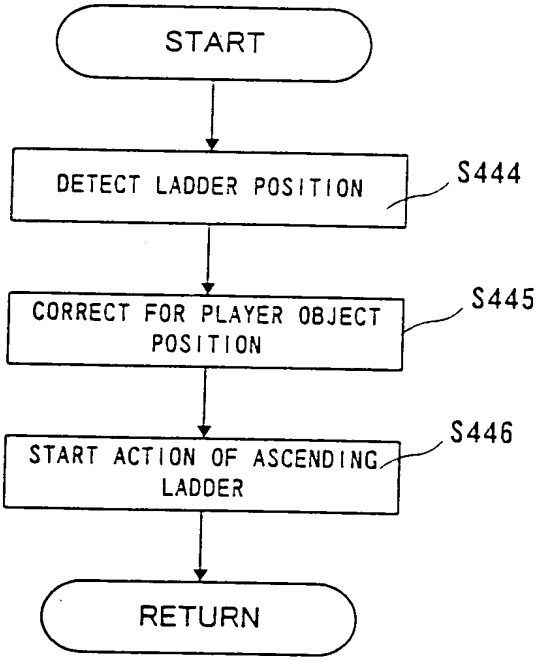

START
DETECT LADDER POSITION
S444
CORRECT FOR PLAYER OBJECT POSITION
S445
START ACTION OF ASCENDING LADDER
S446
RETURN

FIG. 25

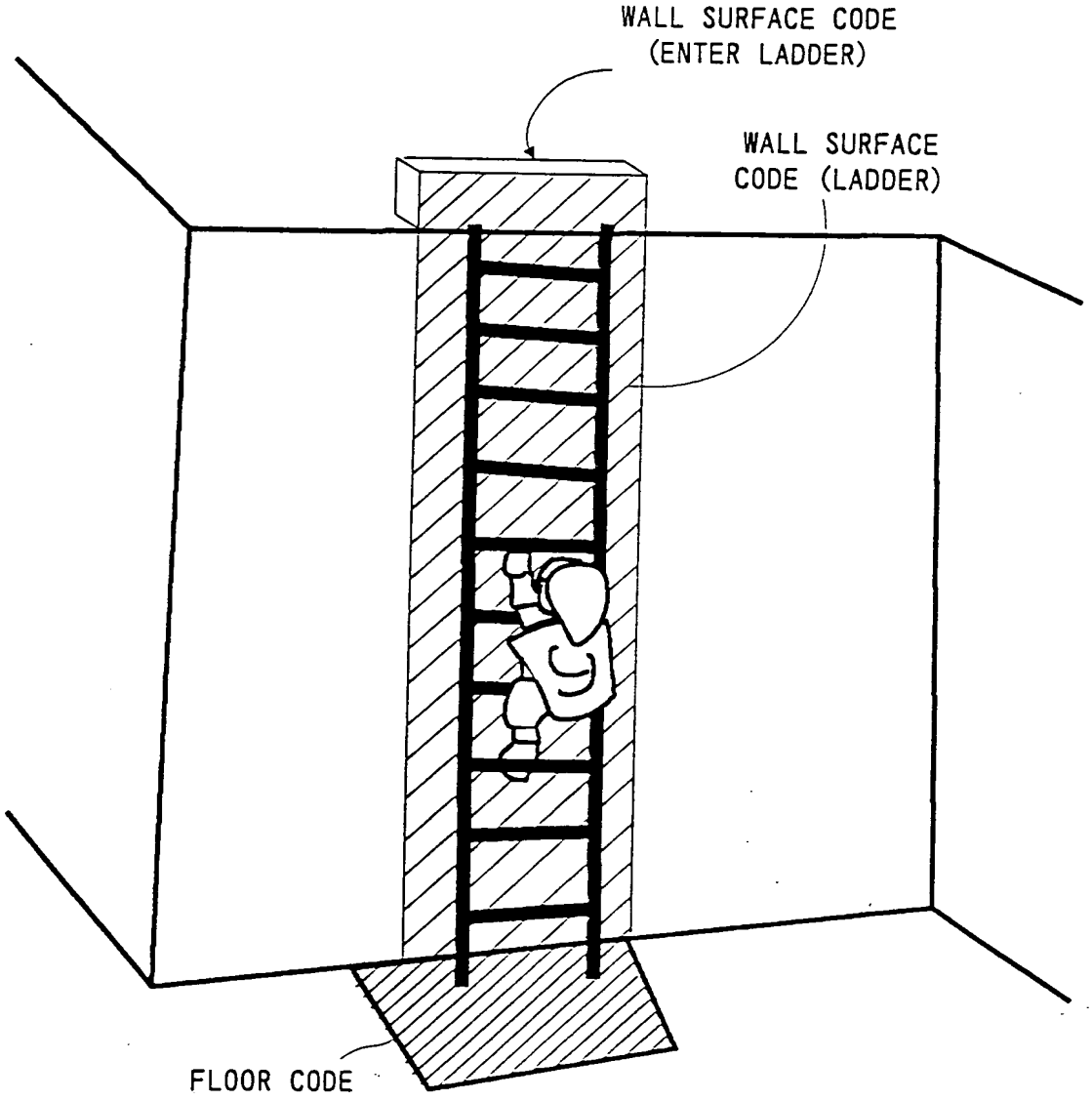

WALL SURFACE CODE
(ENTER LADDER)
WALL SURFACE
CODE (LADDER)
FLOOR CODE

FIG. 26

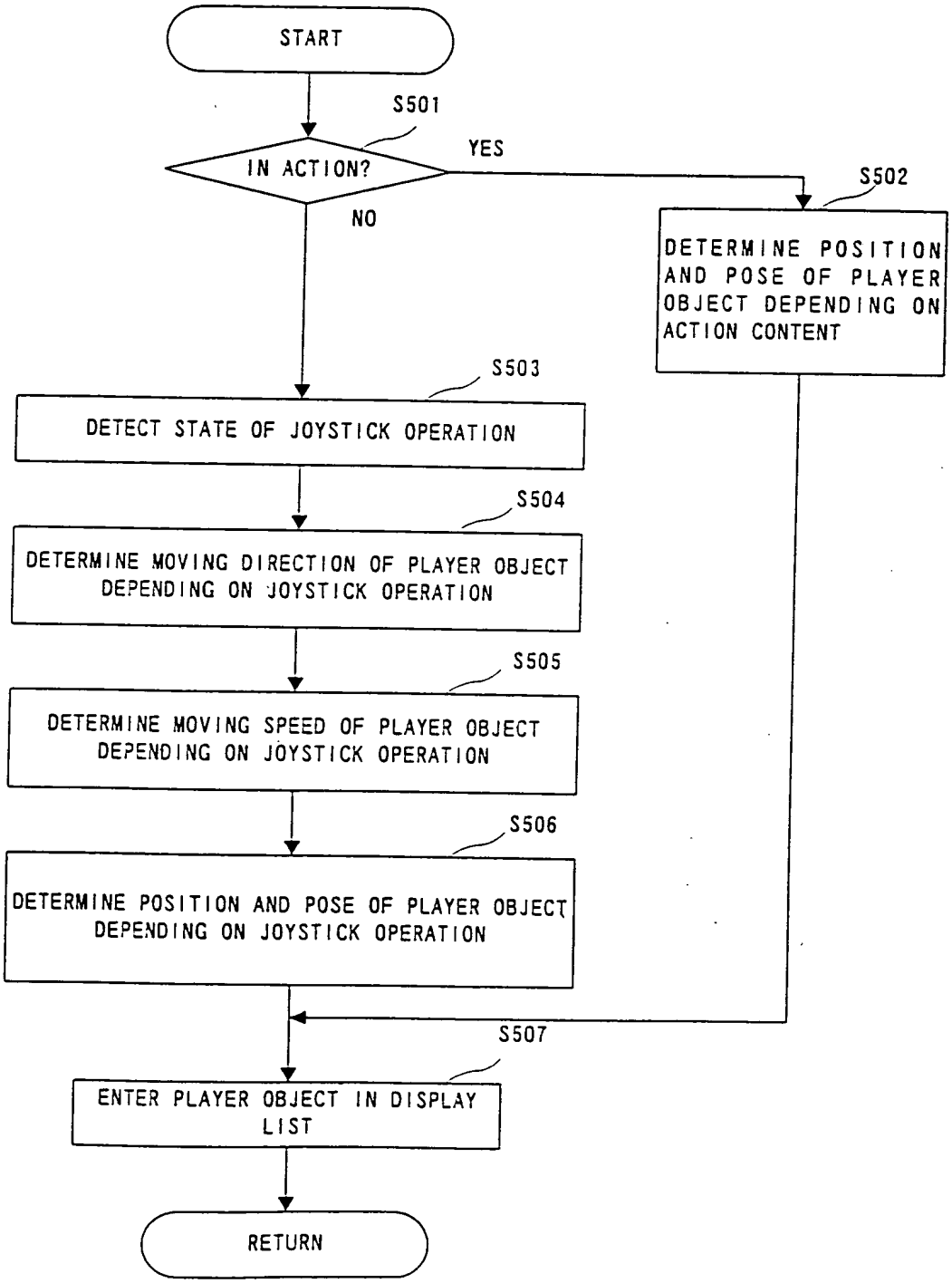

START
S501
IN ACTION?
YES
NO
S502
DETERMINE POSITION AND POSE OF PLAYER OBJECT DEPENDING ON ACTION CONTENT
S503
DETECT STATE OF JOYSTICK OPERATION
S504
DETERMINE MOVING DIRECTION OF PLAYER OBJECT DEPENDING ON JOYSTICK OPERATION
S505
DETERMINE MOVING SPEED OF PLAYER OBJECT DEPENDING ON JOYSTICK OPERATION
S506
DETERMINE POSITION AND POSE OF PLAYER OBJECT DEPENDING ON JOYSTICK OPERATION
S507
ENTER PLAYER OBJECT IN DISPLAY LIST
RETURN

FIG. 27

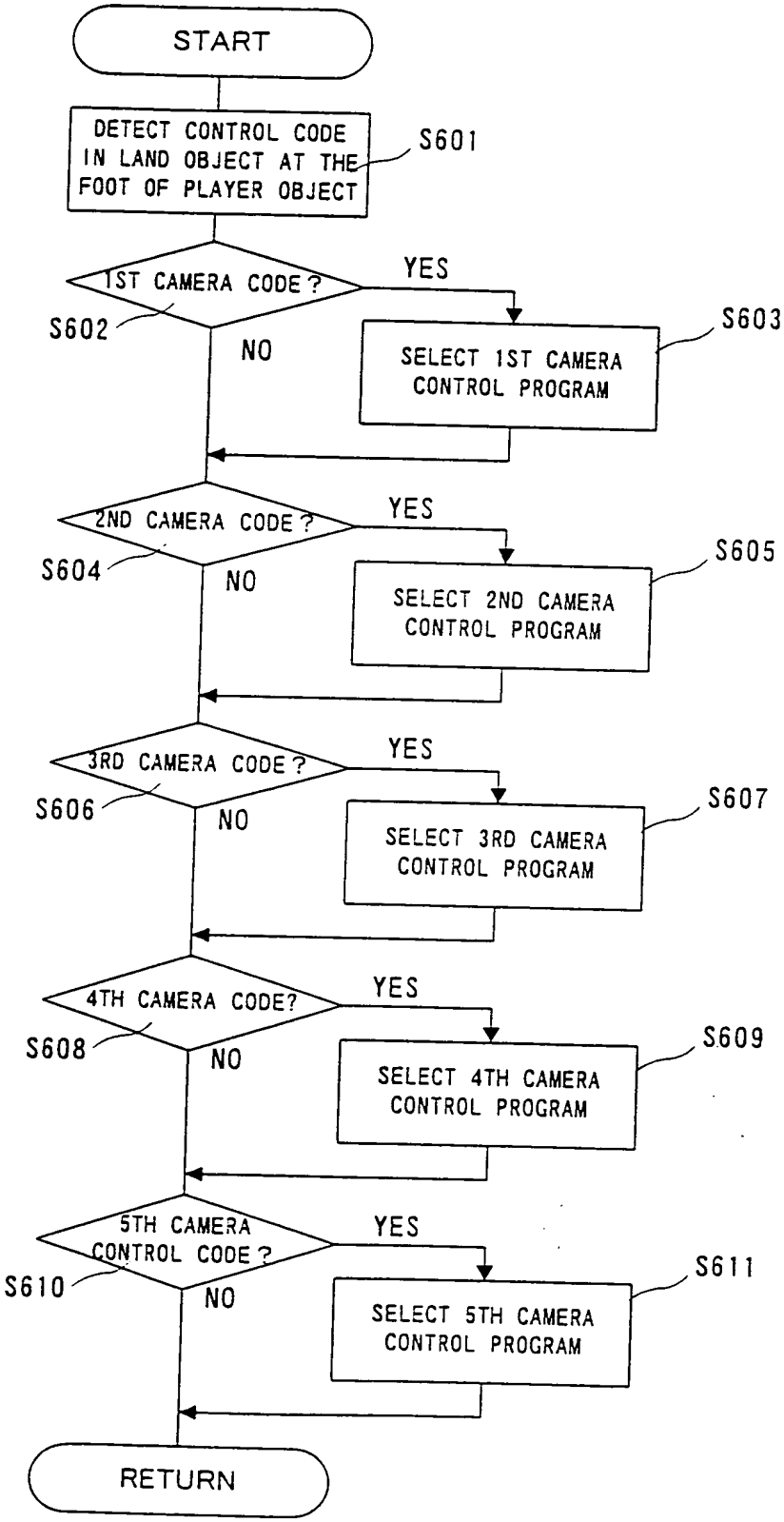

START
DETECT CONTROL CODE IN LAND OBJECT AT THE FOOT OF PLAYER OBJECT
S601
1ST CAMERA CODE ?
S602
YES
NO
SELECT 1ST CAMERA CONTROL PROGRAM
S603
2ND CAMERA CODE ?
S604
YES
NO
SELECT 2ND CAMERA CONTROL PROGRAM
S605
3RD CAMERA CODE ?
S606
YES
NO
SELECT 3RD CAMERA CONTROL PROGRAM
S607
4TH CAMERA CODE?
S608
YES
NO
SELECT 4TH CAMERA CONTROL PROGRAM
S609
5TH CAMERA CONTROL CODE ?
S610
YES
NO
SELECT 5TH CAMERA CONTROL PROGRAM
S611
RETURN

FIG. 28

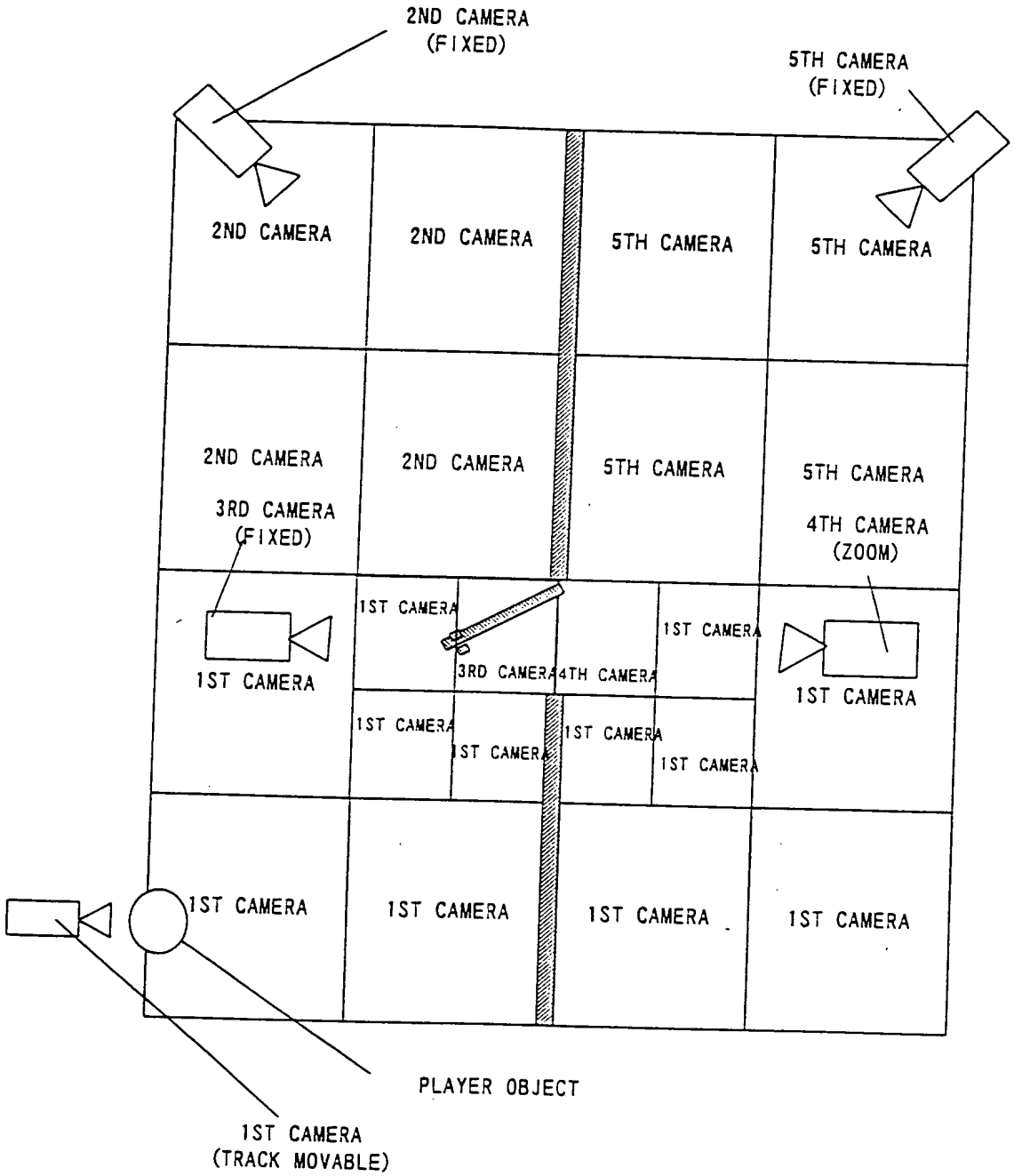

2ND CAMERA
(FIXED)
5TH CAMERA
(FIXED)
2ND CAMERA
2ND CAMERA
5TH CAMERA
5TH CAMERA
2ND CAMERA
2ND CAMERA
5TH CAMERA
5TH CAMERA
3RD CAMERA
(FIXED)
4TH CAMERA
(ZOOM)
1ST CAMERA
1ST CAMERA
3RD CAMERA
4TH CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
1ST CAMERA
PLAYER OBJECT
1ST CAMERA
(TRACK MOVABLE)

FIG. 29

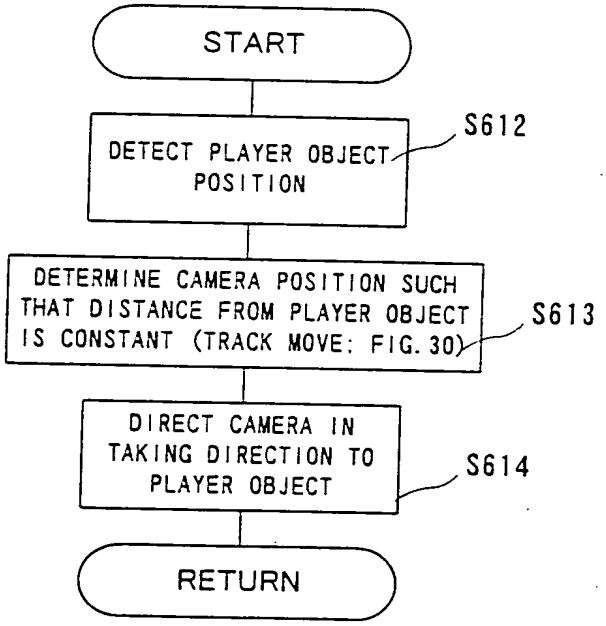

START
DETECT PLAYER OBJECT POSITION
S612
DETERMINE CAMERA POSITION SUCH THAT DISTANCE FROM PLAYER OBJECT IS CONSTANT (TRACK MOVE: FIG. 30)
S613
DIRECT CAMERA IN TAKING DIRECTION TO PLAYER OBJECT
S614
RETURN

FIG. 30

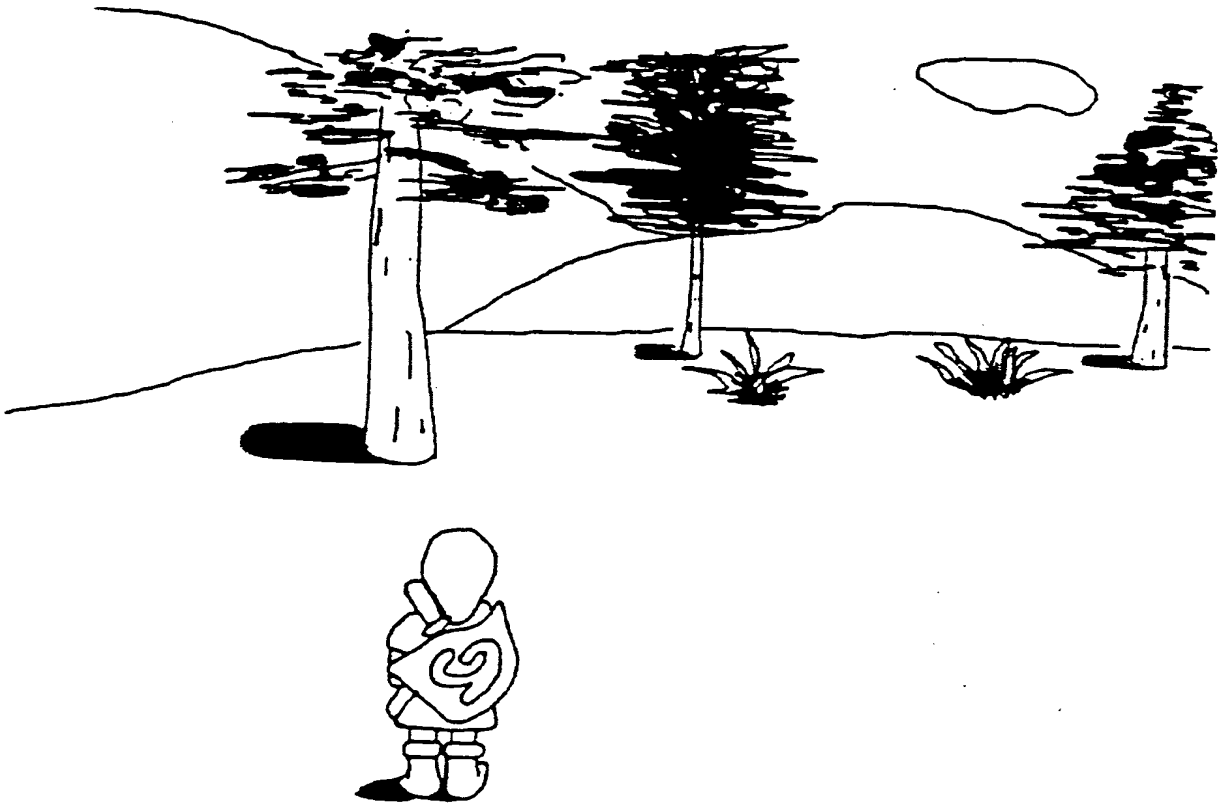


FIG. 31

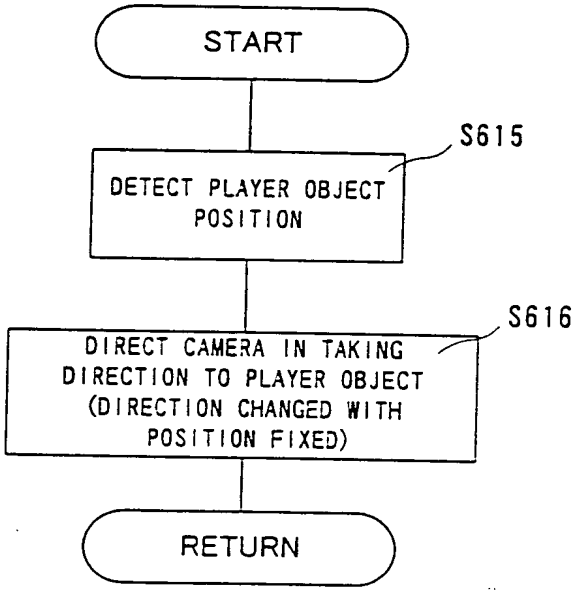

START
S615
DETECT PLAYER OBJECT POSITION
S616
DIRECT CAMERA IN TAKING DIRECTION TO PLAYER OBJECT (DIRECTION CHANGED WITH POSITION FIXED)
RETURN

FIG. 32

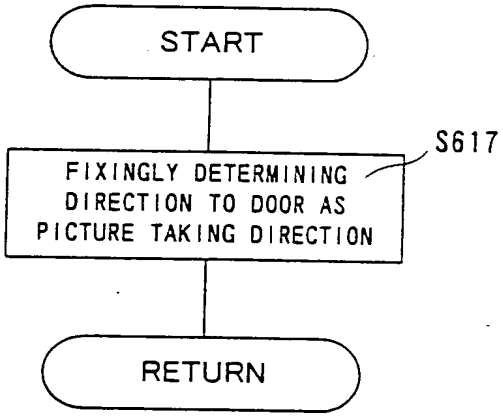

START
S617
FIXINGLY DETERMINING DIRECTION TO DOOR AS PICTURE TAKING DIRECTION
RETURN

FIG. 33

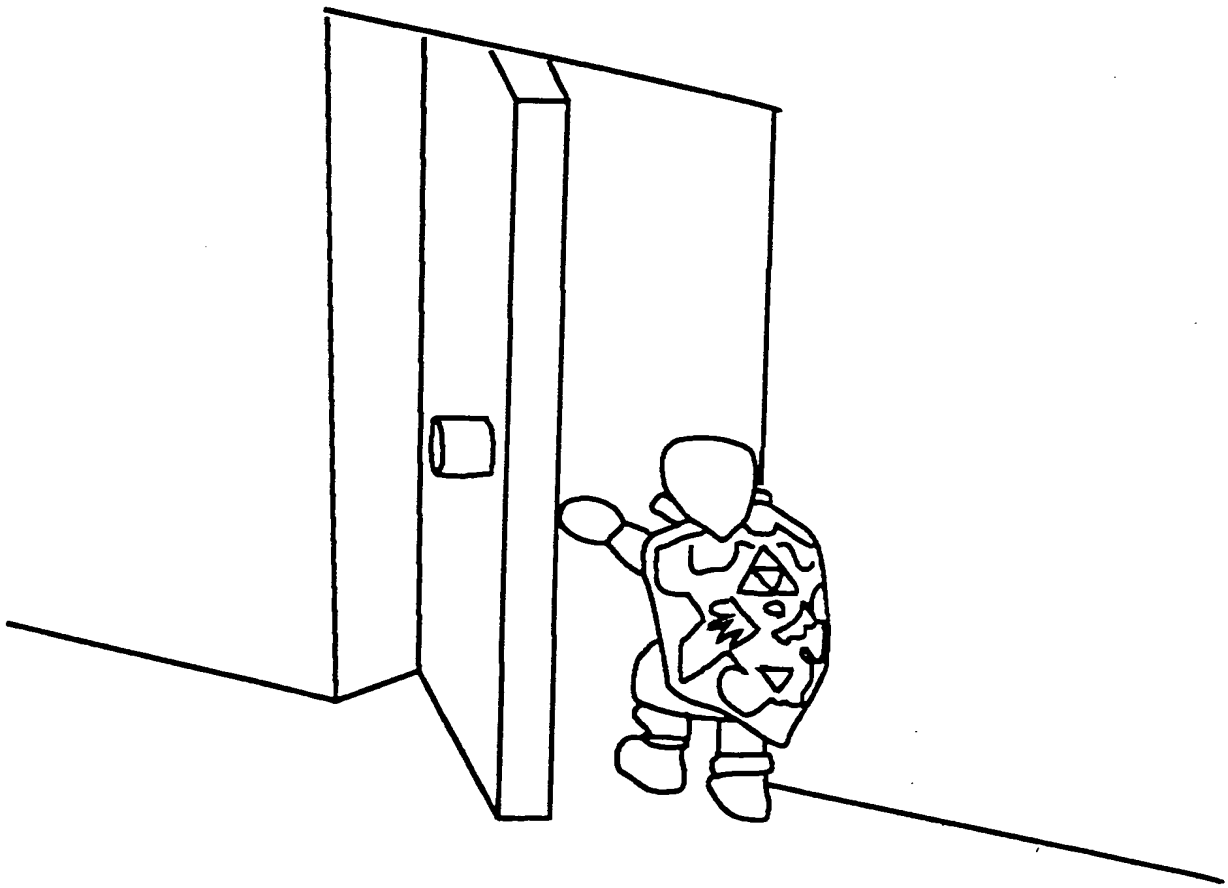


FIG. 34

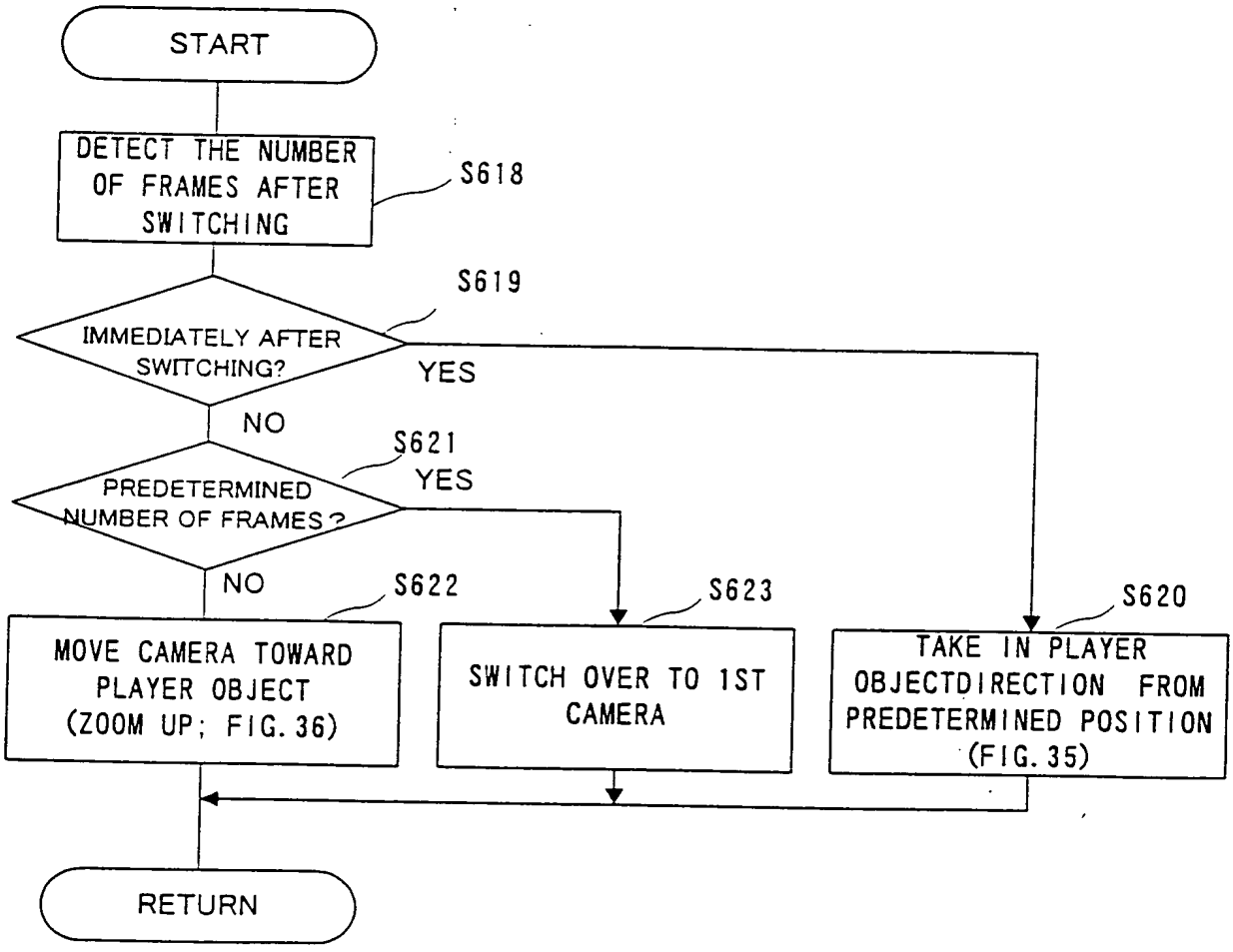

START
DETECT THE NUMBER OF FRAMES AFTER SWITCHING
S618
IMMEDIATELY AFTER SWITCHING?
S619
YES
NO
PREDETERMINED NUMBER OF FRAMES?
S621
YES
NO
MOVE CAMERA TOWARD PLAYER OBJECT (ZOOM UP; FIG. 36)
S622
SWITCH OVER TO 1ST CAMERA
S623
TAKE IN PLAYER OBJECTDIRECTION FROM PREDETERMINED POSITION (FIG. 35)
S620
RETURN

FIG. 35

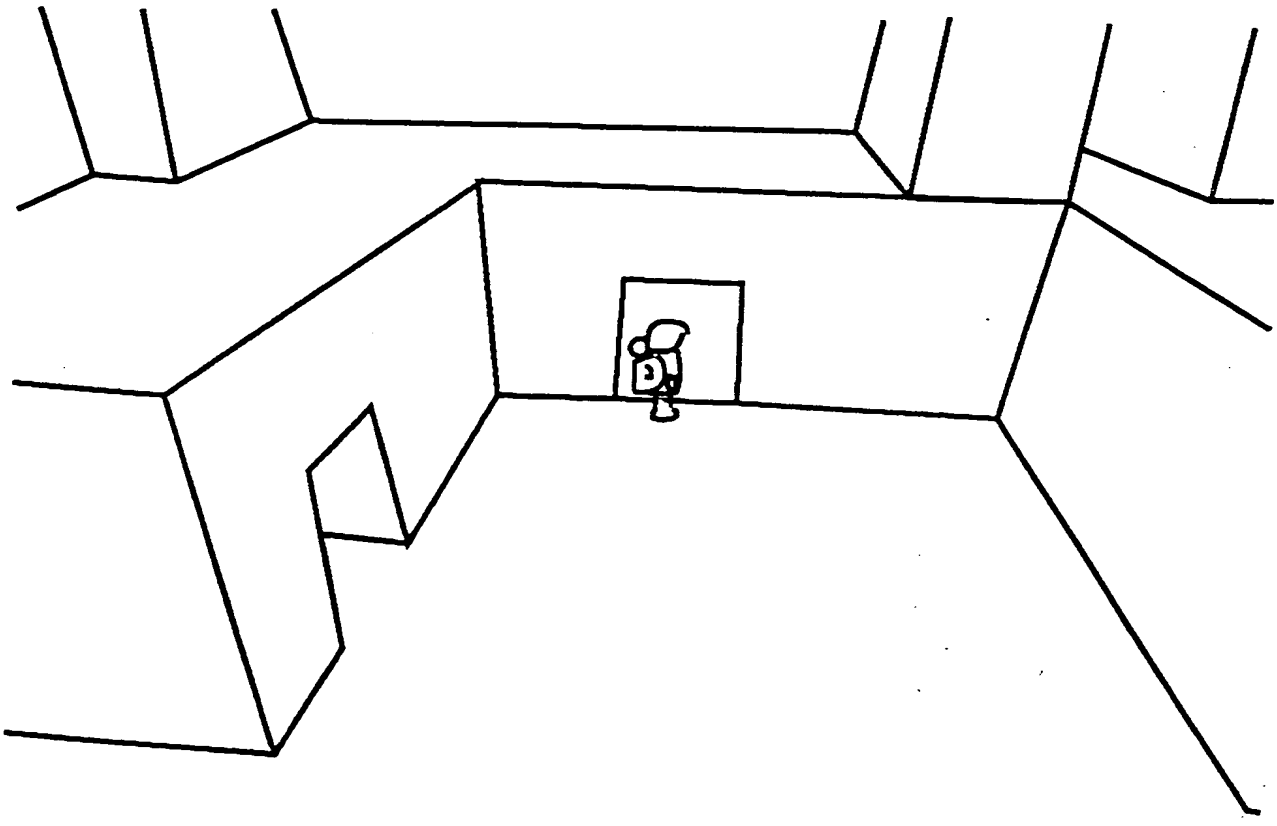


FIG. 36

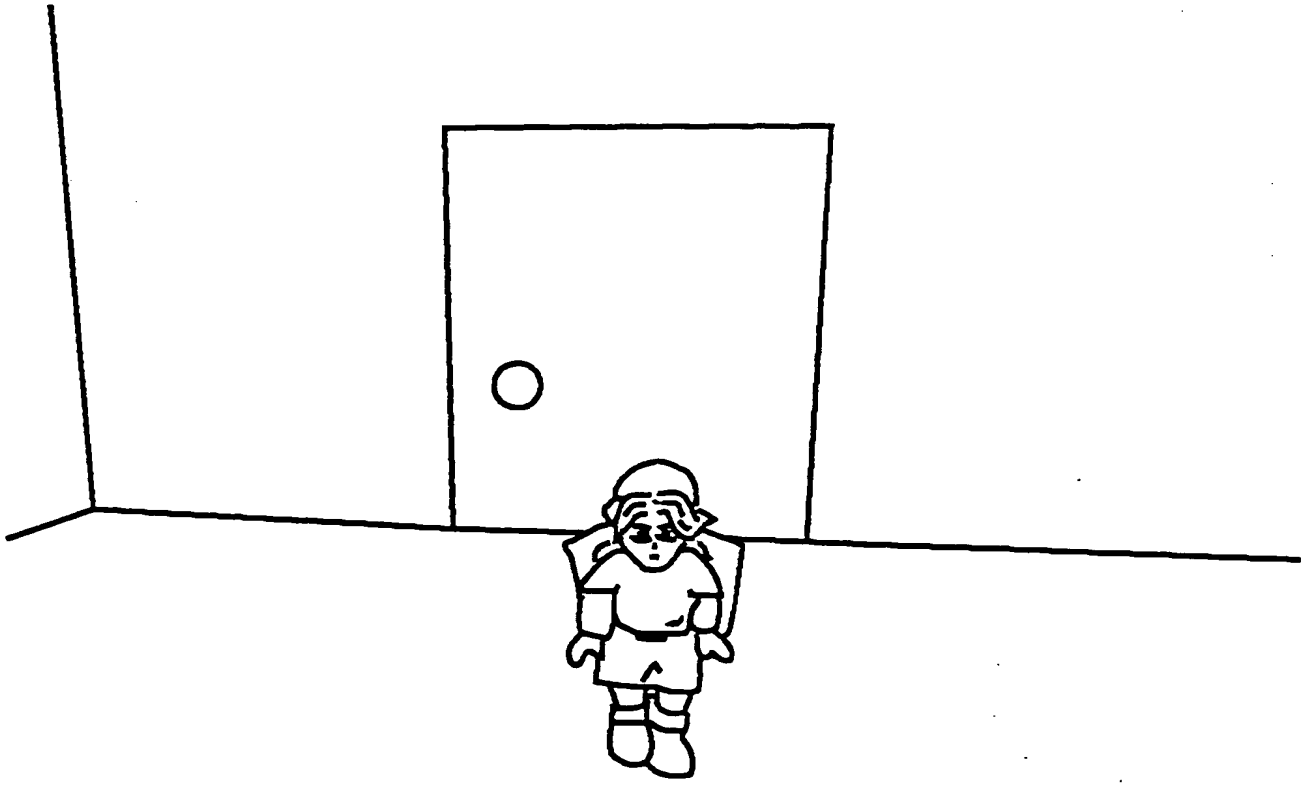
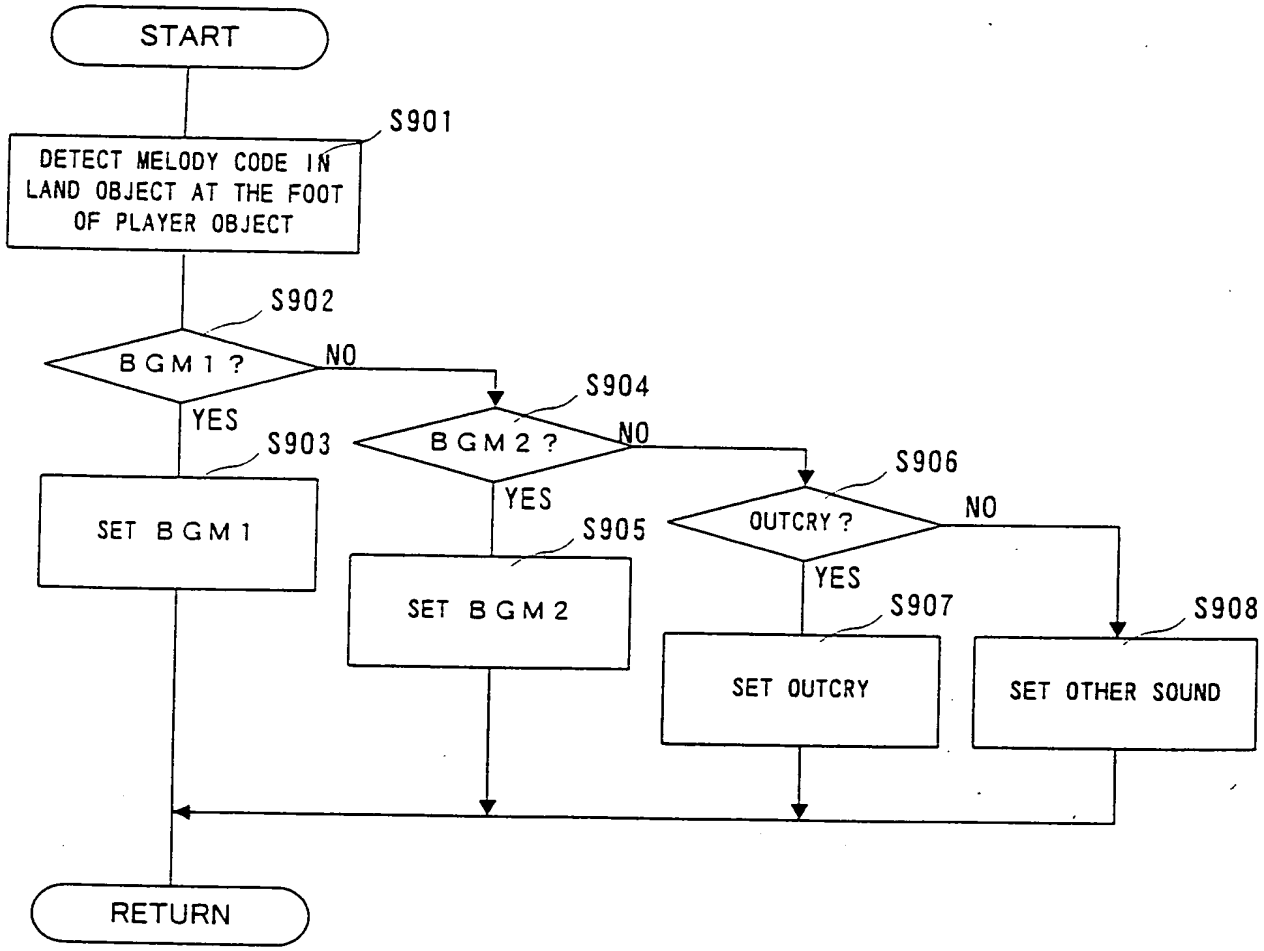


FIG. 37


START
S901
DETECT MELODY CODE IN LAND OBJECT AT THE FOOT OF PLAYER OBJECT
S902
BGM1?
NO
YES
S903
SET BGM1
S904
BGM2?
NO
YES
S905
SET BGM2
S906
OUTCRY?
NO
YES
S907
SET OUTCRY
S908
SET OTHER SOUND
RETURN